



EARLY MESOAMERICAN CITIES

URBANISM AND URBANIZATION
IN THE FORMATIVE PERIOD

EDITED BY MICHAEL LOVE
AND JULIA GUERNSEY

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Urbanization is a phenomenon that brings into focus a range of topics of broad interest to scholars. It is one of the central, enduring interests of anthropological archaeology. Because urbanization is a transformational process, it changes the relationships between social and cultural variables such as demography, economy, politics, and ideology. As one of a handful of cases in the ancient world where cities developed independently, Mesoamerica should play a major role in the global, comparative analysis of first-generation cities and urbanism in general. Yet most research focuses on later manifestations of urbanism in Mesoamerica, thereby perpetuating the fallacy that Mesoamerican cities developed relatively late in comparison to urban centers in the rest of the world. This volume presents new data, case studies, and models for approaching the subject of early Mesoamerican cities. It demonstrates how the study of urbanism in Mesoamerica, and all ancient civilizations, is entering a new and dynamic phase of scholarship.

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CHAPTER ONE

INTRODUCTION

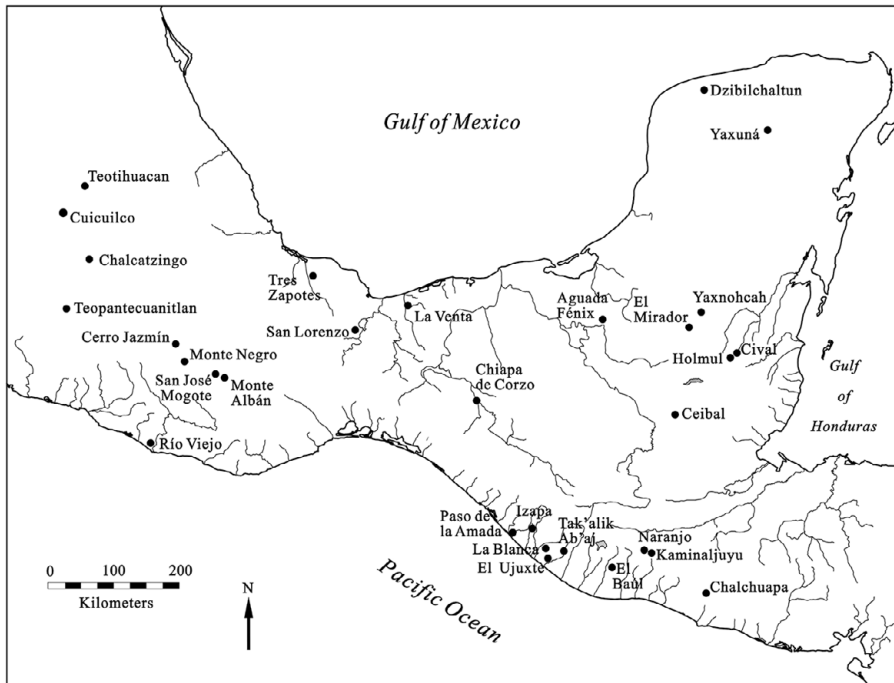
Early Mesoamerican Cities, Urbanism, and Urbanization in the Formative Period

Michael Love

ANCIENT MESOAMERICA WAS A LAND OF CITIES (FIG. 1.1). ABOVE ALL, IT was the number and the density of cities that distinguished Mesoamerica from the complex societies in neighboring areas of North America and lower Central America. Further, although ancient Mesoamerican cities interacted to varying degrees with those cultures to the north and south, they interacted most intensively with one another. It was the shared cultural practices produced by those relationships that define Mesoamerica (Kirchoff 1943; R. Joyce 2004a). In short, Mesoamerica is defined by its cities, their interactions with one another, and the cultural patterns created and sustained by those relationships. It is the beginnings of those cities, and their interactions, that form the principal themes of this volume.

The temporal focus of this volume is the Formative or Preclassic¹ period, when the earliest Mesoamerican cities came to be and when patterns of interaction were first shaped. Not too long ago, the phrase “Formative period urbanism” would have been viewed as an oxymoron. Formative period settlements in Mesoamerica were described as villages, hamlets, and small towns; they were called anything but cities. The reluctance to embrace Formative period urbanism is unwarranted, as can be seen in Table 1.1, which

¹ The editors have respected individual authors’ preferences for the use of the terms “Formative” or “Preclassic,” either of which refers to the same temporal span of roughly 2000 BCE–300 CE. All of the authors in this volume use calibrated dates.



1.1. Map of Formative period sites. Map by author

compares the sizes of the cities of Formative period Mesoamerica with settlements considered to be the earliest cities in other parts of the world. The Mesoamerican examples fit quite comfortably, and we should put to rest any accusations of “city envy.” Moreover, research over recent decades has demonstrated that the Formative period of Mesoamerica (2000 BCE–300 CE) was not a mere prelude to the Classic period (300–900 CE). In fact, for some regions, populations were higher and there was greater sociopolitical complexity during the Formative period than in the ensuing Classic period. Not only were there true cities in the Formative period, but many were larger than those of the Classic (A. Joyce 2009; Love 2010, 2011a, 2014; Pool 2012).

WHY THINK ABOUT URBANISM AND URBANIZATION?

Urbanization is a phenomenon that brings into focus many topics of broad interest to all disciplines that investigate the human past; its study is also an enduring interest of anthropological archaeology and kindred disciplines. As a transformational process, urbanization changes the relationships between many social and cultural variables including demography, economy, political structures, and ideology. Urbanization is more than just population growth and nucleation, however; the emergent properties of urbanization create new identities, economic relationships, materialities, and social realities (M. L. Smith 2003,

TABLE 1.1. *Comparison of the size of Formative period Mesoamerican cities with that of early cities in other parts of the world – Mesoamerican data provided by contributors to this volume*

Region	City	Area (hectares)	Dates of Occupation	References
Mesopotamia	Nagar	100		Emberling 2003
	Kish	550		Moorey 1978
	Uruk	250		Nissen 2001
Andes	Moche	135		Chapdelaine 2000
	Tiwanaku	600		Janusek 2008
	Wari	600		Schreiber 2001
Gulf Coast	San Lorenzo	500–700	1450–1000 BCE	Pool and Loughlin, Chapter 3
	La Venta	400	1000–400 BCE	Pool and Loughlin, Chapter 3
	Cerro de las Mesas	146	600 BCE – 300 CE	Pool and Loughlin, Chapter 3
	Tres Zapotes	500	400 BCE – 300 CE	Pool and Loughlin, Chapter 3
Maya Lowlands	El Mirador	450 core, 1600 overall		Demarest 2004; Hansen 2016
	Cival	70 core, 685 settlement	1000 BCE – 200 CE	Estrada-Belli 2006, 2011
	Holmul	55 core 1200 settlement	1000 BCE – 1000 CE	Estrada-Belli 2011
	Yaxuná	800–900	300 BCE – 200 CE	Stanton and Collins, Chapter 4
Western Mesoamerica	Río Viejo	225	700 BCE – 1100 CE	Joyce, Chapter 2
	Huamelulpan	212		Joyce, Chapter 2
	Yucuita	100		Joyce, Chapter 2
	Cerro Jazmín	86		Joyce, Chapter 2
	Monte Negro	78		Joyce, Chapter 2
	Monte Albán	442	500 BCE – 800 CE	Marcus and Flannery 1996
	Teotihuacan	2000		Cowgill 2015
Southern Maya Region	Chocolá	800		Kaplan and Valdés 2004
	El Ujuxte	400 core, 900 overall	300 BCE – 100 CE	Love 2011
	Izapa	800		Love and Rosenswig, Chapter 7
	Kaminaljuyu	900 in Late Preclassic		Love 2011
	Tak'alik Ab'aj	650 in Late Preclassic	100 BCE – 100 CE	Popenoe de Hatch et al. 2011

2019; Yoffee 2005). Analysis of first-generation urbanization therefore offers an important opportunity to achieve a holistic perspective on important changes in the human condition as well as a myriad of issues of interest to the humanities and social sciences.

As one of the limited number of cases in the world where urban centers developed independently, Mesoamerica should play a major role in the world-wide comparative analysis of early cities and the emergence of urbanism in general. Some of the contributions to be made by such engagement are addressed by Monica Smith and Norman Yoffee in their chapters here (Chapters 10 and 11, respectively). Nevertheless, the perception among many scholars, perhaps even most, around the globe is that Mesoamerican cities developed relatively late in comparison to the rest of the world. Major publications discussing early urbanism continue to draw their Mesoamerican case studies from the Classic and Postclassic periods (e.g., Marcus and Sabloff 2008; Mastache et al. 2008; Sanders et al. 2003; M. L. Smith 2003; Storey 2006). Although recent works focusing on Mesoamerican urbanism increasingly make reference to Formative period cities (e.g., Arnould 2012; Blanton 2012; Carballo 2016; A. Joyce 2009; Pool 2012), they generally do so from a local or regional perspective. Frequently, a case is made for an individual settlement as a Formative period city, but the site under consideration is presented as precocious or unique, and the arguments sometimes peppered with hyperbolic verbiage such as “Mesoamerica’s first city” or the “cradle of Mesoamerican civilization.” The case of Monte Albán is an exception to such exclusion, as that settlement has long been recognized as a Formative period city, and has received extensive attention over the past thirty years or more (Blanton et al. 1993; A. Joyce 2009; Marcus and Flannery 1996; Spencer and Redmond 2004). It has not been discussed, however, as part of the widespread development of cities across Mesoamerica in the Late Formative. Another powerful point of comparison is found in the recent work by David Carballo (2016), truly a milestone, which makes the case for extensive Formative period urbanism in Central Mexico, but still includes scant reference to that region’s links to other areas. In sum, we might say that while urbanism in Formative Mesoamerica has been recognized by some, a framework for discussing Formative period cities as a pan-Mesoamerican phenomenon has not been developed, or even attempted. More importantly, perhaps, scholars outside of Mesoamerica seem unaware of the extent of urbanism in Mesoamerica prior to the Classic period.

If our collective goal is to engage in the comparative analysis of first-generation cities, scholars of early urbanism must understand the nature of Mesoamerica’s Formative period cities. Conversely, scholars working on early Mesoamerican cities must engage the rest of the world and draw upon theories, models, and data from comparative studies of early cities elsewhere. A first step, however, must be to explicitly address the scale and nature of these

cities through empirical studies that use a framework of comparative urban analysis.

Definitions of Urbanism?

It is traditional in an introduction such as this to provide definitions of cities and urbanism.

As Paul Wheatley (1972: 602) noted, however, definitions vary according to the interests of the scholar and are often adjusted so as to include all cases that a given author intuitively views as cities. For that reason, we should begin with Louis Wirth's (1938: 1) simple, yet elegant, statement that "cities are relatively large, dense, and permanent settlement of heterogeneous individuals." That statement can be paired with Wheatley's (1972: 601) view that urbanism is "customarily used to denote qualities possessed by certain of the more compact clusters of settlement features that at any particular moment in time represent centroids of continuous population movement."

Everyone agrees that cities are large and diverse settlements, but beyond that there is little consensus. A larger problem is that definitions are largely retrospective; most archaeological studies take definitions from the modern world and attempt to impose them on the ancient past. So anthropologists and archaeologists adopt models from the Chicago School (e.g., Park 1925; Wirth 1938) or the German School (e.g., Simmel 1950; Weber 1962), and ask whether ancient cities fit effectively into such schemes. We express surprise, disappointment, or confident self-congratulation when they do or don't, depending on our goals. The focus in this volume, by contrast, is forward-looking, in the sense that the chapters seek to understand the emergence of new ways of life during the course of the Formative period or how the emergence of cities changed the way people lived.

One goal of this volume is to debate how cities and urbanism should be defined in Formative period Mesoamerica. Beyond the basic criteria of relatively large and relatively diverse settlements, readers will find a lack of agreement among the authors. To be sure, providing definitions and evaluating data against them can be, at times, enlightening, as shown by Scott Hutson's (2016) work on Classic period Maya urbanism. At other times, however, it is better to be vaguely right than precisely wrong. Arbitrary thresholds can preclude the examination of instructive case studies and worthwhile comparative analysis. As Travis Stanton and Ryan Collins demonstrate in Chapter 5, the processes of place-making and of centralization, critical components of urbanization, can take place at many scales. The events that they discuss for Yaxuná, perhaps the smallest of the cities examined in this volume, are remarkably similar in concept to those of Teotihuacan, the largest addressed in this book (Sugiyama, Chapter 8).

As Yoffee (2005: 2) stated, the game of measuring cities against an arbitrary definition is a “relic of disco-era social theory.” Early considerations of urbanism in archaeology focused on a limited set of traits against which a given settlement was judged as “urban” (e.g., Childe 1950). Despite the difficulty that archaeologists have in estimating population parameters, many scholars continue to adhere to absolute thresholds of population size or density (e.g., Gates 2003; Sanders and Price 1968; Sanders and Webster 1988). Proponents of such thresholds, however, disagree on where such levels should be set. Some argued forcefully for thresholds in the tens of thousands, or even hundreds of thousands. More recently, other scholars have argued that urbanism can be present at a much smaller scale, even under 1,000 people (M. Hansen 2008).

Criteria based upon density, following sociologists such as Max Weber (1962) and Wirth (1938), have been shown to be ethnocentric and premised on idealized European concepts of walled cities (M. E. Smith 2010a). In counterpoint, increasingly influential are definitions of dispersed urban settlement that do not require a high density of population but still involve large contiguous populations (Fletcher 2012). Roland Fletcher’s model is particularly relevant to tropical climes, such as the lowlands of Mesoamerica, but for Formative period Mesoamerica it is also useful in understanding the first cities in temperate highland zones.

With both absolute size and density proving to be problematic defining characteristics, many recent approaches have focused more on the *process* of urbanization rather than on strict definitions of cities and/or urbanism. The continuum between early central places, especially economic centers, and large cities has long been recognized (Adams 1966; Algaze 2008; Blanton 1981; Sanders and Webster 1988), even by those who favor absolute thresholds for defining urbanism or cities. Michael Smith (2001, 2008a; Smith and Novic 2012), for one, has emphasized such functional criteria for urbanism, stressing central place activities that vary in scale and can be present in even small regional centers. In his view, villages, towns, and cities represent a hierarchy of urban forms that all serve central place functions. V. Gordon Childe (1950), too, saw that ancient urban settlements could have small populations, and that it was the degree of difference between settlements within a region that was important.

Another approach emphasizes urbanization as a process by which social relationships are transformed. Monica Smith (2003: 16) proposed that “the city form represents the physical manifestation of social transformation,” but, she insists, social transformations cannot be matched precisely to a particular population size or areal extent. In this view, the social processes of urbanization often begin in relatively small settlements, even while some of them intensify as social scale increases. Arthur Joyce (2009: 192) expresses similar views: “Practices and the cultural and material conditions that constitute social

formations such as those that characterize different urban landscapes are always negotiations among differently positioned actors – socially embedded individuals and groups – distinguished by varying identities, interests, emotions, knowledge, outlooks, and dispositions.”

Although it is impossible to find consensus in such diverse views, I believe that most scholars, including those in this volume, now view urbanism as a continuum that cannot be cleanly converted into a dichotomy of nonurban and urban. Many attempt to achieve clarity by decoupling “urban” from “city.” This approach distinguishes function from size, using “city” to identify one and “urban” to identify the other (Hutson 2016; M. E. Smith 2001, 2008a; see also Christopher Pool and Michael Loughlin, [Chapter 3](#), and Travis Stanton and Ryan Collins, [Chapter 5](#), for overviews of the varying uses of the terms urban, urbanization, and city). Such semantic play may provide some clarity, but it robs us of using the adjective “urban” to describe the demographic aspect of cities and “urbanization” to describe the process of city growth. Many authors in this volume use “urban” in the functional sense to denote central places, but others do not. Julia Guernsey and Stephanie Strauss ([Chapter 9](#)) make good use of “urban” to derive “urbanity,” a term that is both sonorous and enlightening; it would be lost if we insisted on limiting “urban” to denote central place functions. So long as an author’s meaning is clear, there is no reason to impose a uniformity of language and definition on contributors to a volume such as this one.

The present volume was created with the hope that the chapters in it would stimulate a discussion of the nature of early cities in Mesoamerica, how they compare to other early cities around the world, and their relationship to later urban manifestations in Mesoamerica. The scholars taking part in this volume do not necessarily share a common viewpoint on these topics nor a single theoretical perspective. As I’ve already noted, they often don’t share common definitions or nomenclature either. This diversity of opinions is welcome, because there is nothing more edifying than a good debate. George Cowgill (2004) urged us to “outgrow typological approaches and focus instead on degrees and kinds of urbanism,” and this volume takes Cowgill’s advice to heart.

A BRIEF HISTORY OF URBANISM AND URBANIZATION IN MESOAMERICA’S FORMATIVE PERIOD

Over the course of the Mesoamerican Formative period, mobile groups of presumably egalitarian hunter-gatherers became socially stratified city-dwellers with intensive systems of subsistence and robust economies of exchange. The structures of daily action, by which people interacted with one another and by which they defined their identities, were fundamentally altered (Love 1999a). Social inequality became pronounced, new crafts and trades came into being,

and increasing population densities affected the patterns of daily interaction. The intensification of long-distance trade undoubtedly exposed even the most sedentary of individuals to contact with people from distant territories.

The narrative of urbanization in Mesoamerica must begin with the establishment of the first villages. Each of the regional studies in this volume traces the development of urbanism from its roots in the Early Formative. It is the appearance of the earliest villages and the first use of pottery that define the beginnings of the Formative period (ca. 2000–1700 BCE for most regions). The end of the Formative is conventionally placed at about 250 or 300 CE but is no longer linked to cultural traits, such as the use of the Long Count calendar by the lowland Maya, a practice now known to have begun during the Late Formative and outside of the Maya Lowlands.²

In the functional sense (see M. E. Smith 2001, 2008a), the process of urbanization in Mesoamerica began with the establishment of early regional centers such as San José Mogote in Oaxaca (Joyce, Chapter 2), San Lorenzo in Veracruz (Pool and Loughlin, Chapter 3), and Paso de la Amada in Chiapas (Love and Rosenswig, Chapter 7). As in other parts of the world, the full commitment to horticulture and sedentism eventually brought about both a significant increase in population and the development of economic surpluses that enabled social inequality to be manifested as differences in wealth.

The best evidence for the emergence of inequality and centralization during the Early Formative comes from the Pacific Coast and, in particular, the site of Paso de la Amada in the Mazatán region of Chiapas, Mexico. Covering at least 60 ha, the site had communal features, including the earliest documented ballcourt in Mesoamerica (Hill et al. 1998). A considerable amount of communal labor was invested in the construction of the ballcourt and other central buildings, which may be either elite residences or public structures. Paso de la Amada was both a sacred place and a political center, and is at present “the earliest known ceremonial center in Mesoamerica” (Clark 2004: 45).

In the latter half of the Early Formative, still larger regional centers arose. San Lorenzo, located in modern Veracruz, is generally accepted as the largest. Regional survey suggests that San Lorenzo may have been as large as 700 ha, although the density of population within that space is uncertain. The center of the site was a plateau covering 50 ha. San Lorenzo has been labeled by some as Mesoamerica’s first city, and it is viewed by many as the point of origin of Mesoamerica’s first “civilization,” the Olmec (see, for example, Clark 1997). However, the role of San Lorenzo in relationship to the rest of Mesoamerica

² The Mesoamerican base-20 Long Count system measures the amount of time that has passed since a starting date of 3114 BCE. The earliest Long Count dates are found on monuments at Chiapa de Corzo in Chiapas, Mexico (Lee 1969: fig. 60) and at Tres Zapotes, in Veracruz, Mexico (Coe 1957).

remains contentious, and there is no doubt that by 1200 BCE emerging regional centers throughout Mesoamerica were interacting with one another economically and culturally.

In my view, the interaction of major centers and the widespread use of various materials in the “Olmec style” (Coe 1965a; de la Fuente 1973; Love and Guernsey 2008) represents the earliest establishment of a Mesoamerican “high culture” in the sense defined by John Baines and Yoffee (1998), and the instantiation of elite identities that cut across ethnic and linguistic boundaries. These patterns of social stratification and elite interaction were not uniform throughout Mesoamerica, but they represent the beginnings of the kind of “urbanities,” or elite shibboleths, that Guernsey and Strauss (Chapter 9) propose.

The Middle Formative period in Mesoamerica was a critical juncture that saw the formation of large cities through more extensive regional aggregation. It was a time of incipient cities, with denser populations as well as larger overall settlement size. While settlements over 50 ha were rare in the Early Formative, there are many Middle Formative centers over 100 ha. The area of monumental architecture at La Venta, Tabasco, for example, covered 2 km² at its peak and, with areas of habitation included, may well have extended over 4 km² (Pool and Loughlin, Chapter 3). Teopantecuanitlan in Guerrero, Chalcatzingo in Morelos, and Tres Zapotes in Veracruz were all well over 1 km² (Pool 2007; Pool and Loughlin, Chapter 3). La Blanca, on the Pacific Coast of Guatemala, covered just over 3 km² (Love and Guernsey 2011; Love and Rosenswig, Chapter 7). Emerging complexity also is evident in the Maya Lowlands, as discussed in this volume by Marcello Canuto and Francisco Estrada-Belli (Chapter 4) and Stanton and Collins (Chapter 5), at sites including Cival in the Northern Petén (Estrada-Belli 2011), Yaxuná in Yucatan (Stanton 2012), and Ceibal in the Pasión River region (Inomata 2017). The authors of Chapters 4 and 5 propose that modified landscapes, especially in ceremonial architectural configurations known as E Groups – which are characterized by a long platform, oriented north to south, on the eastern side of a plaza, and by a pyramidal structure on the western side of the plaza (see Stanton and Collins, Chapter 5, Fig. 5.3 for the Mounds 5E-2 and 5E-1 E Group at Yaxuná) – promoted aggregation in the Maya Lowlands. From these beginnings, other late Middle Formative lowland Maya sites, such as Nakbé in the Mirador Basin (R. Hansen 2005, 2016), further demonstrate large-scale monumental construction, overall large size, and the dynamics of emerging urbanism.

During the Middle Formative, people engaged in new and expanded efforts to create culturally modified landscapes on a monumental scale. Public buildings reached new heights, quite literally, with construction of monumental temple pyramids at La Venta (Mound C-1) and La Blanca (Mound 1). Public spaces, especially plazas, became increasingly larger and we can speculate that plaza size was linked to population at those centers (Inomata 2006; cf. Ossa,

Smith, and Lobo 2017). Horizontal expressions of monumentality, or the construction of massive platforms and artificial plateaus, also characterized this era at some sites (Inomata et al. 2020; Reese-Taylor 2021; Reese-Taylor et al. 2018). As Guernsey and Strauss (Chapter 9) discuss, monuments, especially carved stone sculpture, became more numerous, but only at a handful of centers during the Middle Formative period. The monuments served place-making roles in these cities, and distinguished them from their hinterlands. They also communicated important messages about emerging social relationships.

The widespread construction of E Groups throughout eastern Mesoamerica is another sign of the materialization of shared ideas of place-making and community (for the distribution of E Groups in the Maya Lowlands, see Canuto and Estrada-Belli, Chapter 4, Fig. 4.2) (Doyle 2012, 2017). Disputes about where E Groups are found first (Clark and Hansen 2001; Inomata 2017) may obscure recognition of a shared history of city planning. The differences among regional centers should not distract from recognition of the emergence of many shared concepts, throughout Mesoamerica as a whole, of what a city should be. We cannot attribute the general trend toward settlement growth and centralization across Mesoamerica to purely demographic factors: there were many attractive forces – religious, political, and economic – which drew people together.

Although both the routes to Formative urbanism and the rates of urbanization varied, the trajectory of increasing social complexity and political centralization climaxed in the Late Formative period with the development of fully urban state polities in most regions of Mesoamerica, before upheavals at the end of the Formative period ended the cycle. Nonetheless, there was significant variation in how these Late Formative polities were constituted. In some regions, such as the Soconusco, Oaxaca, and the Maya Lowlands, there are signs of decidedly hierarchical relationships and the emergence of forms of rulership that endured into the Classic period. In other cases, such as Tres Zapotes in Veracruz and Río Verde in Oaxaca, there are signs of competitive dynamics that mitigated highly centralized forms of government.

Late Formative cities were both larger and more numerous than those of the Middle Formative, occurring over a wide extent of territory that stretches throughout the geographic boundaries of Mesoamerica, from Central Mexico to modern-day El Salvador. Those cities were diverse in their organization, their political basis, and their longevity. In some areas, city plans follow a common template across broad regions. The incorporation of triadic groups in lowland Maya sites is one example. In Veracruz, the Standard Plan, originally defined by Annick Daneels (2002) for the Classic period, appears at many sites by the Terminal Formative (Pool and Loughlin Chapter 3). On the Pacific Coast, as discussed by Love and Robert Rosenswig (Chapter 7), variations on a common site plan appear throughout much of the Soconusco, and share

elements with the Middle Formative Chiapas plan and triadic groups discussed by John Clark and Richard Hansen (2001). Less standardized, but nonetheless closely linked principles of site planning in the Valley of Guatemala, are also discussed by Bárbara Arroyo in [Chapter 6](#) (following Shook 1952). Similarly, Carballo (2016) discussed the shared principles of mound placement and orientation in the Basin of Mexico, which provided antecedents for Teotihuacan (also see Sugiyama, [Chapter 8](#)).

The Late Formative period is also notable for the intensification of agricultural production, which increasingly relied on irrigation or other water management systems including raised fields constructed on the margins of lakes or swamps (see Arroyo, [Chapter 6](#)). These highly productive agricultural systems enabled larger overall populations, higher population densities, and greater surpluses that were ultimately controlled by increasingly wealthy and powerful elites in most regions (Love 2014).

WHAT MESOAMERICA CAN SHOW ABOUT URBANISM AND EARLY CITIES

The Mesoamerican cases presented in this volume demonstrate the difficulty of using rigid criteria to define any aspect of urbanization or cities, and the diversity of forms discussed as cities by the authors herein frustrate simple distillation and concise summary. The cities differ not only in scale, but in the organization of their relationships to sustaining hinterlands and in the type of political dynamics that shaped them. Extreme variations can be found in cities with close proximity, as shown by Joyce in [Chapter 2](#) where he contrasts Monte Albán in the Valley of Oaxaca to Río Verde, on the Pacific Coast, as well as to the Mixteca region of the Oaxacan Highlands. Temporal variations in any sample city can be extreme as well, as shown by Christopher Pool and Michael Loughlin's ([Chapter 3](#)) comparison of urban forms at Tres Zapotes in the Middle and Late Formative periods.

The collective examples in the volume illustrate, too, how important it is to appreciate the *longue durée* of the Mesoamerican Formative period. There is consensus among the authors that cities were widespread throughout Mesoamerica by the Late or Terminal Formative period (although not all regions are uniform in using, or defining, the period of time designated as Terminal Formative). But the extent of urbanism in prior periods is debatable, and whether they warrant designation as cities is dependent upon the definitional criteria applied. Many political centers of the Middle Formative, such as La Venta, Tres Zapotes, La Blanca, and Izapa, can be viewed as cities or not, depending on definitions. Whatever one's views about those cases, and even if we conclude that they were not cities during the Middle Formative, they clearly have characteristics that mark them as the direct precursors of later

forms that are undeniably cities, a point addressed by almost all contributions here, but most explicitly by Stanton and Collins ([Chapter 5](#)).

Theorizing Urbanization

Having arrived at the conclusion that cities developed throughout Mesoamerica in the Formative period, what are we to do with this insight? Does recognizing Formative period settlements as urban improve our understanding of them or the links between them? Clearly it does, first and foremost, because it allows us to engage with bodies of theory about urban societies around the world. Thinking about the Mesoamerican Formative period is still dominated by functionalist and evolutionist models in which analogies are drawn from societies described as chiefdoms in literature concerning Polynesia, North America, and Africa. These models may have some applicability to the Early Formative, but are clearly inappropriate for the latter portions of the Formative period. Instead, for the Late Formative, we should be seeking models, both empirical and theoretical, in the first-generation urban societies of Mesopotamia, the Indus Valley, and China. Smith ([Chapter 10](#)) and Yoffee ([Chapter 11](#)) point out some areas of theoretical and empirical engagement, and the chapter by Guernsey and Strauss ([Chapter 9](#)) illustrates the fruitful results of such engagement. Perhaps most significantly, the contributions to this volume demonstrate a number of important ways in which viewing Formative period settlements as urban changes our interpretations of them. Here, I will highlight just a few.

Diversity

By most definitions, cities are characterized not merely by size, but also by the diversity of their populations. The functionalist perspective of neo-evolutionary models stressed biological analogies in which all societies were viewed as integrated totalities. By positing population growth as the driving force of socio-cultural evolution, such models viewed cities as the result of in situ growth and proposed that regional hierarchies in the hinterland were formed as groups branched off to form secondary and tertiary settlements (e.g., Flannery 1976a), all hierarchically organized to administer larger populations. Increasingly, and as highlighted by the chapters in this volume, archaeological evidence indicates that most first-generation urban centers form through aggregation: people of different backgrounds come together in an alliance, or consortia, of interests (to use Smith's term from [Chapter 10](#)). Rather than being integrated and homogeneous totalities, cities were fragmented amalgamations of groups and factions. In the concluding chapter to this volume, Yoffee ([Chapter 11](#)) suggests that these early cities were

“experimental.” That insight helps us understand why so many first-generation cities in Mesoamerica were fragile, and why they often lasted only briefly.

In Formative period Mesoamerica, there are notable cases of cities forming through large-scale aggregation. Teotihuacan, in the Late Formative period, may be the best documented case, as reviewed by Sugiyama in [Chapter 8](#). The first surge of rapid growth at Teotihuacan came about through the aggregation of 80 percent of the population of the Basin of Mexico. As Cowgill (2015) has emphasized, it was that first instance of rapid growth that made Teotihuacan a city. The subsequent spurt in growth, placed at about 200 CE by Sugiyama in his chapter, propelled the city to be the greatest metropolis of ancient Mesoamerica.

Oaxaca also shows multiple cases of aggregation. Famously, Monte Albán was formed as a new settlement at the center of the Valley of Oaxaca around 500 BCE, in what Joyce (2009) describes as the “big bang” of Oaxacan urbanization. In [Chapter 2](#), Joyce further elaborates on Monte Albán and the forces of aggregation in play at that city. He contrasts those forces that formed Monte Albán to those evident at Río Viejo, where he interprets the variability in construction materials and techniques as evidence that people from different communities took part in the building of the acropolis. Joyce links the differing circumstances between these cases to the very different urban forms that resulted, some more successful – or enduring – than others.

In highland Guatemala, during the Late Formative Verbena phase, Kaminaljuyu grew significantly in population at the same time that long established centers such as Naranjo, Santa Isabel, and Virginia declined (Shook and Popenoe de Hatch 1999). Arroyo ([Chapter 6](#)) posits that people from outside the Valley of Guatemala were drawn to the expanding city as well, and discusses evidence for the existence of neighborhoods in Kaminaljuyu, which demonstrate links to distinct regions of highland Guatemala. The differential distribution of pottery wares and types, she argues, may reflect the maintenance of identities linked to the places of origin for emigrants to the metropolis.

Canuto and Estrada-Belli ([Chapter 4](#)) argue that the first southern lowland Maya urban centers were newly formed communities from the outset. In their view, archaeological evidence at many sites shows that open spaces, and the foundational events that transpired in them, provided the “locus for the communal interaction of tribal leaders.” These interactions eventually led to the growth of settlements, which set in motion the process of urban growth.

A major episode of aggregation also took place at La Blanca, on the Pacific Coast of Guatemala, around 1000 BCE (Love and Rosenswig, [Chapter 7](#)). As surrounding areas lost population, La Blanca was founded and rapidly grew to be a settlement of approximately 300 ha, with a 100 ha central ceremonial precinct boasting some of the largest monumental architecture of the time.

Despite this dramatic episode of aggregation, La Blanca was not a homogenous and tightly integrated community. There were distinct districts within it, and at least two of them have small “public” or ceremonial mounds, suggesting that, in addition to whatever community rituals took place in the central precinct and the Great Plaza, there were smaller scale public rituals in districts beyond the ceremonial core.

Several chapters in the volume – Joyce (Chapter 2), Pool and Loughlin (Chapter 3), and Arroyo (Chapter 6) – address diversity, defined in various ways, through the identification of districts and neighborhoods, which M. E. Smith (2010a; Smith and Novic 2012) proposed are present in most cities. These examples, along with La Blanca (Chapter 7), call to mind the *altepetl* model of city-state organization in highland Mexico described by Gerardo Gutiérrez (2003, 2012) and Kenneth Hirth (2003, 2008). The Gutiérrez/Hirth *altepetl* model of Postclassic (900–1400 CE) urbanism in Central Mexico stresses that aggregation does not necessarily result in complete integration. According to Hirth (2008), urbanism was the unintentional by-product of political alliances, in which quasi-autonomous social units (called *calpolli* in the Nahuatl language of the Aztecs) coalesced under the rulership of a dominant group; the overall political formation was called the *altepetl*. The capital of that political system was a city, but the political structure of the *altepetl* was not coterminous with the city nor was it continuous in extent. Rather, the landholdings of several neighboring *altepetls* could be interspersed with one another.

The *altepetl* model reflects an indigenous view of what constitutes a city (Canuto and Estrada-Belli provide another in Chapter 4) and has been used to interpret Classic and Post-Classic urbanism in other regions of Mesoamerica outside the basin of Mexico, including Guerrero (Gutiérrez 2003, 2012) and the lowland Maya region (Arnould 2008; Webster et al. 2008). Arroyo, in Chapter 6, also applies the concept to Kaminaljuyu and, although she focuses on the ideological and symbolic dimensions of the *altepetl* model, its factional and political dimensions are also evident in her identification of neighborhoods.

Corporate groups such as the *altepetl* may not have existed in the Formative period, but other types of groups, perhaps more kinship based than the Postclassic *calpolli*, may have emerged, especially as the control of land became more crucial to the economy. For example, Ruud van Akkeren (2016) has proposed that lineages formed the basis of the alliances that led to the formation of Postclassic cities and states in highland Guatemala. No matter what the basis of group formation and cohesion was, there is sufficient evidence to suggest that many Formative period cities were formed by the aggregation of, and alliance between, diverse groups that did not completely integrate with one another. Certainly, there may have been a strong social hierarchy, and probably rulers in many cases, but there was also a tension between hierarchy

and heterarchy. That tension is an essential component of the urban social experience in early cities around the world.

Materiality and the Generative Power of Place

Yoffee (2005) emphasizes that cities are not just concentrations of people, regardless of how they got there. Cities are generative, producing new economic relationships, new political dynamics, and new identities (see also M. L. Smith 2018, 2019). These are just some of the emergent properties of urbanization, unforeseen and unintended. Joyce (Chapter 2) emphasizes this generative power when he says “cities connect people both in the center and hinterland in ways that generate technological, social, and cultural innovations as well as novel identities.” The generative power of cities stems from both the relationships among the individuals and groups that reside there, and the materialities related to place making. Efforts to integrate the diverse populations drawn to cities often emphasized the creation of place, and all of the chapters in this volume address how that was done. In that sense, however, cities are not so different from other spaces where people aggregate. In most of the examples provided by the studies herein, attempts to create places, especially sacred places, precede the emergence of cities. The lowland Maya examples are especially salient in their conclusion that the aggregation of diverse groups at sacred spaces marked on the landscape preceded the establishment of permanent habitation spaces. As the chapters by Canuto and Estrada-Belli (Chapter 4), and Stanton and Collins (Chapter 5) also illustrate, evidence from the Formative period archaeological record can be productively linked to emic understandings of the significance of “place” drawn from the Classic-period hieroglyphic record. These sacred spaces of the lowland Maya became a nexus of habitation and, eventually, came to be dominated by elites. In other regions of Mesoamerica, however, such as the Pacific Coast and the Gulf Coast, the emergence of central places seems to go hand-in-hand with the development of social inequality.

The extent to which cities, as opposed to smaller central places, are generative of new practices and new identities is key. As Pool and Loughlin (Chapter 3) state, “the making of urban spaces involves more than just the concentration and segregation of population and the construction of impressive architecture.” Guernsey and Strauss (Chapter 9) carry this idea further, arguing that, by the Late Formative, when social inequality was well entrenched, urban spaces became places where people produced knowledge, identities, and ideologies. They focus in particular on the way in which art was used to create urban centers, and assert that it played a generative role. Their arguments, although focused on the Pacific Coast and adjoining highlands,

apply more broadly throughout Mesoamerica. Art proliferated in all parts of Mesoamerica during the Late Formative period as urbanism became more common and interaction between cities intensified. Moreover, the differential distribution of art served to mark the status of settlements, distinguishing cities from their hinterlands and their competitors (Guernsey 2012, 2020; Love 2010). New practices linked to art, such as early hieroglyphic writing, also helped to create elite identities through a shared concept of the “urbane,” and Guernsey and Strauss demonstrate that it was not only in the Old World that the concept of city became linked to elite practices that defined “civilized” behavior (see also Wheatley 1972: 602 on moral evaluations of non-urban dwellers).

Art, texts, and the messages encoded in them most clearly correspond to high culture in the sense originally proposed by Baines and Yoffee (1998), in which an aesthetic sensibility served to construct an identity shared by elite members of the same civilization. Cities were places where these new practices and new forms were created. Art not only created cities, but also created elites. Guernsey’s and Strauss’s argument that cities, through their monuments, became places for the production of knowledge and identity, has correlates beyond the domain of art. Late Formative cities generated other forms of practice and knowledge that were just as linked to elite identity. If we broaden the concept of high culture to include other dimensions of elite knowledge, as advocated by Janet Richards and Mary Van Buren (2000), we can note additional important practices. Calendrical knowledge, astronomy, writing, mathematics, and engineering are all examples of the new forms of knowledge – “science” per Aldana (2014) – that were produced in Late Formative cities controlled by emerging elites (Guernsey 2020: 129–130). The Long Count is one example of knowledge produced in urban settings during the Late Formative period. Long Count calendrical statements first appear on stone monuments during the first century BCE and persisted, through the first century CE, in a wide arc extending from Tres Zapotes, Veracruz, to Chalchuapa, El Salvador. Sugiyama (Chapter 8) details horizon observations at Teotihuacan, in the Central Highlands of Mexico, which also indicate knowledge of the same base date to measure linear time beyond the confines of eastern Mesoamerica.

Knowledge of engineering principles also appears to have been shared among elites of the largest cities. Large-scale water management systems, requiring sophisticated mathematics as well as surveying and construction techniques, appeared throughout Mesoamerica during the Formative era. As Arroyo discusses in Chapter 6, Kaminaljuyu’s ancient engineers constructed a massive aqueduct as well as sophisticated canals that controlled hydraulic rates of flow (Popenoe de Hatch 1997). The first irrigation works at Monte Albán and Amaculán are contemporaneous with those of Kaminaljuyu, as are the

water management systems at Tak'alik Ab'aj, Chocholá, and Izapa (Fowler 1987; Gómez Rueda 1995; Kaplan 2008; Marroquin 2005). This contemporaneity cannot be purely coincidental and, wherever such knowledge was created, it seems to have diffused rapidly. The differential forms of cultural and scientific knowledge created at cities simultaneously distinguished them from their hinterlands *and* linked them to other cities across Mesoamerica.

The development of writing, sophisticated mathematics, astronomy, and engineering expertise may mark the development of a high culture of inner elite of the type defined by Baines and Yoffee (1998). The educational structures required to support the transmission of such knowledge are formidable, yet they surely existed by at least the Late Formative period and, just as significantly, appear not to have been supported outside of the largest cities.

Connectedness

Many of the examples just discussed reveal the extent to which intellectual knowledge was shared among early cities in Mesoamerica. Put another way, the Mesoamerican Formative period serves as another demonstration of the fact that cities do not develop in splendid isolation. Cities are most commonly found in networks of interaction; as M. E. Smith noted, "... what is most distinctive and significant about city-states is that they occur in groups or systems of interacting units." Mogens Hansen (2000) refers to these interacting networks as city-state cultures, while Yoffee (2005) refers to them as civilizations.

Economic exchanges, both local and long distance, are clearly a key reason for the existence of cities. Long-distance exchange was undoubtedly a motivation for travel and a means by which ideas spread from region to region. However, there is no single narrative that describes patterns of long-distance exchange in durable goods over the course of the Formative period. In Oaxaca, Joyce (Chapter 2) addresses the importance of prestige goods, derived from distant locales, to early Monte Albán. Sugiyama (Chapter 8) follows many other scholars in acknowledging the importance of ceramic and obsidian production to the growth of Teotihuacan, noting that "highly advanced technologies in ceramic and obsidian production all surged" as Teotihuacan grew. Arroyo (Chapter 6) posits that Kaminaljuyu's position at a crossroads of trade routes linking the Guatemalan Highlands, the Pacific Coast, and the Maya Lowlands was critical to its development as an urban center. Robert Rosenswig and I (Love and Rosenswig, Chapter 7) argue that within the Southern City-State Culture of the Pacific Coast and piedmont, cities were connected by systems of exchange networks moving both north/south (highlands to lowlands) and east/west (especially along the inland waterway paralleling the coast). In the southern Maya Lowlands, Canuto and Estrada-Belli (Chapter 4) note that the cache at Cival represents "one of the largest

concentrations of jade in the Maya area, and reflected craft specialization, long distance trade, and conspicuous consumption ...” Stanton and Collins (Chapter 5) also address the “plentiful evidence for long-distance exchange including ceramics and greenstone” during the Late Formative period, when Yaxuná emerged as a city. But, in counterpoint to such evidence linking increasing interaction to increasing urbanization, Pool and Loughlin (Chapter 3) see a decline in long-distance exchange during the Late Formative when compared to the Early and Middle Formative. They note that

[Middle Formative] La Venta was heavily involved in long-distance trade, bringing in obsidian from sources in Guatemala and central Mexico and iron ore from Chiapas and Oaxaca. The amount of greenstone imported to La Venta was particularly impressive ... As Tres Zapotes moved into the Late Formative period, the import of exotic materials aside from obsidian declined and ceramic similarities across the Isthmus of Tehuantepec lessened.

Perhaps surprisingly, it is evidence of intellectual and cultural exchange, even more than economic exchange, that seems most salient, especially at the elite level. Joyce (Chapter 2) states forthrightly that “religion during the first several centuries of Monte Albán was also informed by goods and ideas that defined a broadly shared high-culture of Mesoamerican nobility as indicated by patterns of long-distance trade in prestige goods as well as shared styles of architecture, ceramic designs, religious symbolism, and elements of early writing.” In a similar vein, Guernsey and Strauss (Chapter 9) discuss the many “urbane” elements that were shared among early cities of the southern highlands and Pacific slope, including sculptural styles, iconographic representation, and hieroglyphic writing. And, despite the decline in economic interactions, Pool and Loughlin acknowledge many of the same dynamics in Veracruz, where “some of the stone reliefs from Tres Zapotes and lesser centers incorporated elements of the iconography and styles found at Izapa and other sites in the Chiapas-Guatemala Highlands, piedmont, and Pacific Coast” zones.

The widespread similarity of Late Formative art styles across southern Mesoamerica, including the Pacific Coast, the Gulf Coast, the Maya Highlands, and the Maya Lowlands, has long been noted (for recent summaries see Guernsey 2006, 2012, 2020; Love 2011a; Rosenswig 2019). To these summaries we must add patterns of architecture and city planning. Two chapters in this volume (Canuto and Estrada-Belli, Chapter 4; Stanton and Collins, Chapter 5) highlight E Group architectural complexes as the attractive forces that led to aggregation, or agglomeration. The E Group complex, however, is found well beyond the Maya Lowlands, and was an essential component of the Middle Formative Chiapas (MFC) plan (Clark and Hansen 2001) that is found in the Gulf Coast, the Chiapas highlands, and

the Pacific coastal plain. Many sites with the MFC plan date to the late Middle Formative period (ca. 600–400 BCE), but early Middle Formative E Groups (1000–600 BCE) are present at La Blanca (Love and Guernsey 2011) and at Kaminaljuyu (the A-IV group). It is important to recognize as well that E Groups are a subset of “solar orientation patterns” also found in Oaxaca at San José Mogote and Monte Albán (Blake 2013).

Highland Central Mexico also participated in broadly shared religious and intellectual traditions. David Grove (1989) identified, at the site of Chalcatzingo, in Morelos, a Middle Formative “southern connection” with the Pacific Coast in addition to more celebrated links with the Gulf Coast. These networks formed part of a widespread Middle Formative high culture of art and religious knowledge, and they endured into later eras. Sugiyama (Chapter 8) notes, for example, that Late Formative Teotihuacan displays an extensive suite of cultural elements shared with the Pacific Coast and the Maya Lowlands, including plain stelae, astronomical expertise, and calendrical knowledge. Sugiyama concludes, in fact, that people were drawn to Teotihuacan as the “result of rather innovative ideological factors that we can productively view as part of a ‘high culture’ system shared with other regions of Mesoamerica.”

Guernsey and Strauss (Chapter 9) make clear that, by the Late Formative, the messages communicated in these religious and artistic expressions of privileged knowledge were not ideologically neutral. They were overtly political strategies birthed concomitantly with the growth of urbanism and social inequality. Moreover, as they explain, while such systems of expression were “at times grounded in a local vernacular, these themes nevertheless reverberated across the landscape of Late Formative Mesoamerica,” evidencing “a vibrant elite communication sphere that transcended linguistic and ethnic boundaries.”

Politics and the Early City

The process of urbanization and the growth of cities is often discussed in the context of state formation (e.g., Childe 1950; Yoffee 2005). Although none of the chapters here focuses explicitly on the development of state-level political institutions, issues of political organization are, nonetheless, foregrounded, and politics are often inferred from city forms. Several contributors argue that framing urbanism in terms of a “cities and states” versus “chiefdoms and villages” dichotomy is far too simplistic. In Formative Mesoamerica there were many distinct types of political integration and governance linked to varieties of urban forms. And, as readers might anticipate, these links defy simple summary and their variety should be seen as an essential element of the complex narrative of urbanism. Likewise, debates as to whether urbanization

is driven by “top-down” or “bottom-up” processes construct another false dichotomy and err in proposing a single model for all of Mesoamerica. The chapters in this volume illustrate great geographic and temporal variation, and underscore that all politics are local.

In a related vein, Joyce (A. Joyce et al. 2001) has argued strongly elsewhere for a consideration of “commoner power” and the agency of all people in a society, beyond just elites. In his chapter in this volume he concludes that many early cities in Oaxaca were initially based on more “communal forms of authority that were characteristic of their founding populations.” But he also acknowledges that Monte Albán seems to have been founded by hierarchical elites who negotiated some form of shared power. The variety of urban forms he sees in Oaxaca, alone, are the differentiated outcomes of political negotiations among the various groups involved in the founding of each city.

Other chapters also explore the relationship between cities and their unique political dynamics. For example, Sugiyama (Chapter 8) presents an argument for an elite-driven process at Teotihuacan as evidenced by the massive renovation of the city ca. 200 CE. Arroyo (Chapter 6) also favors elite driven processes at Kaminaljuyu. She views the economic and the ideological factors that promoted the city’s growth as produced by elite management in the Late to Terminal Formative period. She notes, however, that Middle Formative aggregation at nearby Naranjo, which preceded the rise of Kaminaljuyu, remains enigmatic. The lack of widespread habitation zones at Naranjo may suggest a scenario favored for the Maya Lowlands, in which sacred/ceremonial spaces were created prior to the emergence of rulership and hierarchy. That possibility is muted, however, by the poorly preserved Monument 25 at Naranjo, which may well portray an individual standing in profile on a legged throne or platform (Arroyo, Chapter 6, Fig. 6.3).

On the Pacific Coast, Rosenswig and I (Love and Rosenswig, Chapter 7) interpret monumental Mound 1 at La Blanca as representative of an alliance of factions; its construction was not driven by a top-down process, in other words, but probably by a political alliance of groups drawn from a wide region. The posited districts at La Blanca, each with its own public mound, reflect some kind of heterarchical arrangement despite the probable existence of rulers, whose residence sat on an elevated acropolis adjacent to Mound 1 in the ritual center of the city. By the Late Formative, however, at sites like Izapa and El Ujuxte, elites had gained an upper hand through a combination of economic control and the usurpation of the types of domestic rituals that had, previously, transpired in households at La Blanca and other Middle Formative sites (Guernsey 2012, 2020; Guernsey and Love 2008). No single political model fits the variety of evidence in this region, although it is clear, as

Rosenswig and I conclude, that there was a shift during the Late Formative toward a more centralized and elite-dominated system of governance.

Guernsey and Strauss's (Chapter 9) evidence reinforces this scenario of increased hierarchy by emphasizing that, by the Late Formative, particular forms of sculpture became the prerogative of elites. Elaborately carved stelae portraying kings and gods, which sometimes include hieroglyphic texts, were very limited in their distribution and found only in the largest cities. Elites, in other words, controlled both the resources and the knowledge needed for the creation of these monuments. Their perspective does not deny the agency of commoners but suggests that, to use Michael Mann's (1986) phrase, Late Formative commoners were "structurally outflanked" by the economic powers described by Love and Rosenswig (also see Guernsey 2020; Love 2010).

Yet, as Pool and Loughlin (Chapter 3) caution, any "top-down/bottom-up dichotomy . . . does not quite capture the processes we infer for the Gulf Coast Lowlands . . ." They conclude that, although "politically strategic negotiations among factions and emergent classes played a role in determining urban form," so, too, did "the reconciliation of differing politico-economic traditions with contemporaneous realities." In the Maya Lowlands, the first centers identified by Canuto and Estrada-Belli (Chapter 4) in the south, and by Stanton and Collins (Chapter 5) in the north, were not, apparently, hierarchically structured at all. They concur that the emergence of cities in the Maya Lowlands, as well as rulership, were the unintended outcomes of constructing spaces that were, initially, communal and fundamentally religious in nature. At some point, however, as they address, elites co-opted these spaces and gained control of ritual. As Canuto and Estrada-Belli phrase it, by the beginning of the Late Formative period (ca 350 BCE), lowland Maya "society at large had undergone a significant permutation into something recognizable cross-culturally as an urban center and state capital."

CONCLUDING THOUGHTS

The chapters in this volume illustrate the promise of studying early urbanism in Formative period Mesoamerica, but Mesoamerican scholars first need to embrace the investigation of Formative period settlements as cities. Over forty years ago, Kent Flannery (1976b: 5) complained that Mesoamerican archaeologists approached Formative period sites as layer cakes of stratified remains instead of treating them as villages. The challenge today is to recognize that the Mesoamerican Formative period saw the genesis of cities. We need to investigate those sites as urban settlements instead of small villages or ritual centers with a narrow range of activities. The study of urbanism demands recognition

of the fact that a diversity of both people and practices is a characteristic of cities.

Too many projects still treat early Mesoamerican cities as if they were just ceremonial centers with small and homogeneous populations. They study the largest mounds in the site core or focus on elite activities at those locales. An entirely new perspective is gained when those elite practices are contrasted with those in more mundane residences (e.g., Guernsey 2012, 2020; A. Joyce 2009). Diversity in place of origin is also a possibility that needs to be investigated, given the importance of aggregation in city formation.

In many ways, the chapters in this volume can be considered, collectively, to be a “proof of concept” work. They demonstrate the presence of cities throughout Mesoamerica in the Formative period, as well as the variety of ways in which cities originated and the many forms that they took. We hope these works will spur further research in early Mesoamerican cities and the adoption of new methodologies that recognize the contributions that Mesoamerica can make to the study of urban origins.

A NOTE ON CHRONOLOGIES

The chronologies for many regions of Mesoamerica are currently a topic of dispute, in both relative and absolute terms. For example, a new chronology for Teotihuacan has been proposed by Nawa Sugiyama et al. (2013) and adopted here by Sugiyama (Chapter 8). However, as is always to be expected, this new chronology has not been universally accepted and even challenged by some, such as Rebecca Sload (2015). Some continue to favor a chronology that places the critical Patlachique and Tzacualli phases at ca. 150–1 BCE and 1–200 CE, respectively (e.g., Carballo 2016; Cowgill 2015; Nichols 2016). Cowgill (2007: 263) placed Teotihuacan’s growth primarily in the period 150 BCE–200 CE, stating that after 200 CE “growth probably ceased, and there seems to have been little further change in size until about AD 550, after which there was probably a substantial decline in population . . .” Sugiyama (Chapter 8), however, sees an already-urban Teotihuacan undergoing its most significant growth beginning ca. 200 CE.

Similarly, a revised chronology was proposed for Kaminaljuyu by Takeshi Inomata et al. (2014), which would push that city’s principal growth to after 100 BCE, with the population maxima coming after 100 CE. In accordance with this revised chronology, Inomata and Lucia Henderson (2016) proposed that much of the Izapan-style and early Maya sculptural corpus be placed in this later period. These revisions, and their broader conclusions concerning the cultural climax across the broader highlands and Pacific coastal plains, have been criticized by Love (2018) and Rosenswig (2019).

In truth, these controversies remain to be resolved empirically. But even the most radical of the proposed revisions still places the development of urbanism at these sites in the Formative period. The editors of this volume prefer not to adjudicate these matters and, accordingly, have encouraged each author to use the chronological framework they prefer.

ACKNOWLEDGMENTS

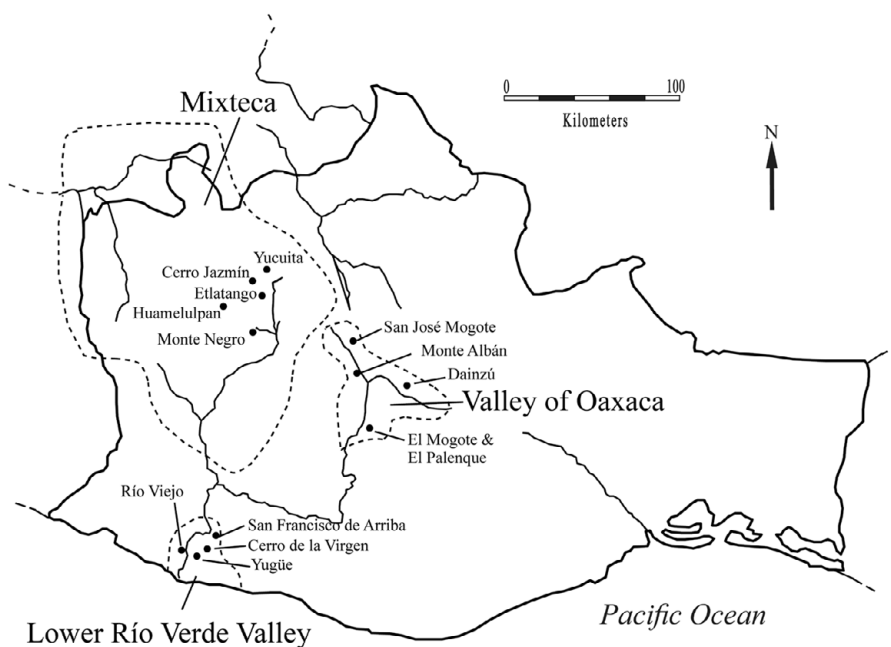
This chapter benefitted greatly from comments and suggestions by Julia Guernsey, Gerardo Gutiérrez, Arthur Joyce, Kathryn Reese-Taylor, Monica Smith, and Norman Yoffee.

CHAPTER TWO

OAXACA'S FORMATIVE PERIOD CITIES AND THEIR IMPLICATIONS FOR EARLY URBANISM IN MESOAMERICA

Arthur A. Joyce

IN THIS CHAPTER, I COMPARE THE SIZE, HISTORY, AND NATURE OF POLITICAL authority and integration of cities and their hinterlands in three regions of later Formative Oaxaca: the Valley of Oaxaca, the Mixteca Alta and the lower Río Verde Valley (Fig. 2.1). Briefly, I define urbanism as a product of intertwined political, economic, social, and religious relations and institutions, simultaneously material and semiotic, which produce dominance and interdependence among the people of cities and their hinterlands (e.g., Joyce 2009; Love 2011a; M. E. Smith 2002). Cities therefore are centers of political, economic, and religious authority that engage the people of a broader hinterland, although these relations are always negotiated, contested, and opened-ended to varying degrees (Janusek 2004; Joyce 2009; Yaeger 2003a; Yoffee 2005, 2009). Cities connect people both in the center and hinterland in ways that generate technological, social, and cultural innovations as well as novel identities (M. L. Smith 2003: 24–28). Some scholars have stressed the ways in which city dwellers are differentiated from those in other communities according to practices, occupations, experiences, and the complexity of social relations, possibilities, and conflicts, especially as understood by notions of identity (Emberling 2003; Guernsey and Strauss, Chapter 9; Hutson 2016; Janusek 2004: 24; M. L. Smith 2003: 24–28; Yaeger 2003a). Such a relational definition of urbanism also means that the boundaries between what is urban and what is not are decidedly fuzzy, making it



2.1. Map of Oaxaca showing later Formative period urban centers. Map by author

possible to speak of degrees of urbanity where smaller communities, typically not viewed as cities, may have urban features (M. E. Smith 2008b: 6, 205; M. L. Smith 2003; Love, Chapter 1).

Early Oaxacan cities exemplify the diversity of urban experiments found elsewhere in Formative period Mesoamerica, as discussed by other authors in this volume. Rather than the inexorable outcome of a cultural evolutionary process, Formative period cities in Oaxaca and beyond were often weakly integrated, contested, and characterized by few of the social, political, economic, and religious practices and institutions that later tied together people both within urban centers and between cities and surrounding communities. I argue that while initial urbanism in all three regions was built on some degree of traditional communal authority, the nature of that authority, and the degree to which it was contested, varied considerably (Joyce 2010). At Río Viejo in the lower Verde and at several urban centers in the Mixteca Alta, political, economic, and religious practices and institutions that could have linked the city with the countryside never materialized to a significant degree. Regional political authority was also tenuous, contested, and fragmented. Not surprisingly, in both regions early urbanism was short-lived with most cities collapsing within a few centuries of their emergence. In contrast, at Monte Albán in the Valley of Oaxaca, rulers were initially successful in negotiating shared forms of governance with more traditional, communal forms of leadership,

and Monte Albán was increasingly tied to outlying communities through political, economic, and ritual relations. By 200 CE, however, tensions between communal and hierarchical forms of leadership may have erupted in a political upheaval with hierarchical forms of authority gaining prominence. The result was a more cohesive polity and urban center that persisted until ca. 800 CE.

MONTE ALBÁN

Undoubtedly the largest and most powerful city of the later Formative in Oaxaca was Monte Albán in the Valley of Oaxaca. Monte Albán was founded at 500 BCE on a series of mountaintops that towered over the center of the Valley of Oaxaca (Joyce 2010, 2020a; Marcus and Flannery 1996). Archaeological evidence indicates that the people who founded Monte Albán came largely from the northern or Etla arm and the center of the valley, especially from San José Mogote, which had been the largest community in the region since the Early Formative period (Flannery 1983). Following its founding, Monte Albán grew into an urban center covering 442 ha with an estimated population of 15,300 by 100 BCE (Table 2.1), which far exceeded any other site in the valley (Blanton 1978; Kowalewski et al. 1989). The ceremonial center of the site was its Main Plaza complex located on the summit of the most prominent mountain (Fig. 2.2). During the first few centuries of the site’s florescence most of the elite families lived in houses near the Main Plaza, while commoners resided on terraces along the hillslopes.

Archaeologists have generally explained the founding of Monte Albán as a result of an intensification of warfare among communities in the Valley of Oaxaca with people moving into higher elevations for defensive reasons (e.g., Marcus and Flannery 1996: 139–154; Spencer 1982, 2003; Winter 2011). Evidence for warfare in Formative period Oaxaca, however, suggests it was

TABLE 2.1. *Settlement data for later Formative urban centers in Oaxaca*

Site	Area (ha)	Estimated Population	Civic-Ceremonial Center
Monte Albán	442 ¹	15,300 ¹	Nucleated
Río Viejo	225 ²	8,500 ³	Nucleated
Huamelulpan ³	212 ⁴ /205 ⁵	7,500 ⁶ /12,500 ⁵	Multiple-nuclei
Yucuita	100 ⁷	5,900 ⁷	Multiple-nuclei
Cerro Jazmín	86 ⁸	7,296 ⁸	Multiple-nuclei
Monte Negro	78 ⁹	3,650 ⁹	Multiple-nuclei

Sources of data: ¹ Blanton 1978: 44; ² Joyce et al. 2013: 135; ³ Based on Sander’s (1965: 50) figure of 37.5 people for a high density compact settlement (see Joyce et al. 2013: 153); ⁴ Balkansky 1998: 49; ⁵ Kowalewski et al. 2009: 169; ⁶ Balkansky et al. 2000: 375; ⁷ Plunket 1983: 341; ⁸ Pérez et al. 2011: table 2; ⁹ Balkansky et al. 2004: table 1



2.2. View of the Main Plaza of Monte Albán. Photo by author

relatively small-scale and largely driven by status competition among elites involving the destruction of public buildings, the capture and sacrifice of rival elites, and possibly the establishment of tributary relationships (Joyce 2014; Workinger and Joyce 2009). Conflict-based models for the origins of Monte Albán underemphasize both the religious significance of Prehispanic warfare and the overwhelming evidence for the importance of religion in the early years of the site.

The labor invested in constructing the Main Plaza as well as the scale of its ceremonial architecture leaves little doubt that religion was important to the early occupants of Monte Albán. Archaeological and semasiographic¹ evidence indicates that the founding and early development of Monte Albán was related to a new religious movement that began the previous century at San José Mogote (Blanton et al. 1999: 105–107; Joyce 2000, 2010, 2020a; Urcid 2011a; Urcid and Joyce 2014), and it is possible that Monte Albán was a sacred mountain even before the arrival of people (Joyce 2020a). Some of the earliest structures associated with the Main Plaza today lie buried, although their form, partially discernable through geophysical prospection, suggests that they were ceremonial buildings (Levine et al. 2021). The buried structures make it difficult to understand the layout of the earliest version of the Main Plaza,

¹ The term “semasiographic” refers to the conveyance of meaning without strict syllabic and/or phonemic coding, which can be multisensorial and can elicit speech forms, including whole words, phrases, and sentence(s) (Javier Urcid, personal communication 2020). For further discussion of the term, see Boone (2000: 29–31).

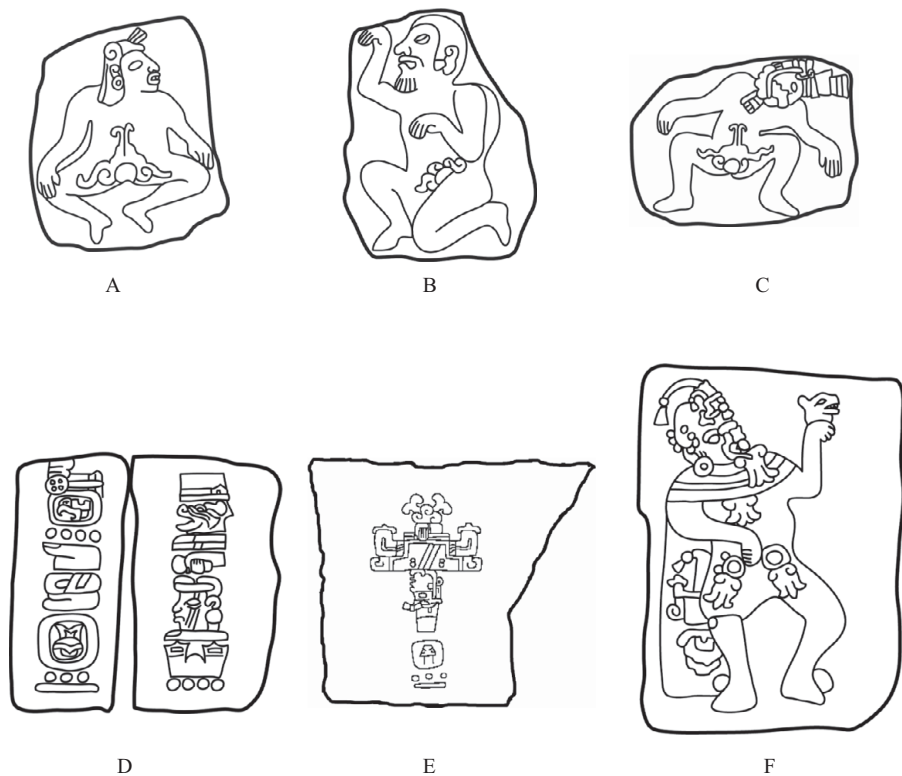
which dates to the beginning of the Danibaa phase (500–300 BCE). Later in the Danibaa phase and continuing into the Pe phase (300–100 BCE), the ceremonial center consisted of an open space, likely a plaza, which was partially surrounded by public buildings where groups of people could gather for ceremonies, although the buried buildings may have partitioned the plaza into northern and southern zones. The scale of the Main Plaza likely increased gradually through this period as buildings were added and the ceremonial space was expanded.

By the Pe phase, if not before, the scale, accessibility, and openness as well as the architecture and imagery on the plaza show that it was constructed as an arena where thousands of people could participate in public ceremonies. Massive temple platforms, including Building L-sub and Building K-sub, bordered the western side of the plaza. The North Platform supported structures that reached heights of 15 m above the Main Plaza and included the remains of several temples (Winter 1994a, 2001). Rituals carried out in the Main Plaza included traditional practices such as ritual feasting, autosacrifice, the burning of incense, and perhaps ancestor veneration and divination, along with newer ceremonies like ritual preparations for battle, human sacrifice, and earth offerings (Blanton et al. 1999: 105–107; Joyce 2000, 2020a, b; Joyce and Barber 2015; Urcid 2011a; Urcid and Joyce 2014). Earth offerings interred in public buildings around the plaza ranged from a few pottery vessels to exotic and highly valued goods made from jade, marine shell, whale ribs, turquoise, and elaborate ceramics along with mosaic masks, effigy vessels, and human skeletons that may have been the remains of sacrificial victims (Caso et al. 1967). Earth offerings were a form of sacrifice that transferred sacred forces to the building and/or to associated deities, which suggests that these buildings were now viewed as living, divine beings and community members (Joyce 2020b; Joyce and Barber 2015). New religious beliefs and practices are also indicated by the first occurrence of imagery depicting deities like the Rain Deity (*Cocijo*), the Ancestor Deity, the Wide-Billed Bird Deity, and the Maize Deity (Sellen 2002; Urcid 2001, 2005). Evidence from imagery and the recovery of stone masks indicate that by this time the wearing of Rain Deity masks in ritualized settings enabled certain people to merge with the deity, much as occurred in later periods. Imagery also provides the earliest evidence for a form of ritual specialist known as a *Xicani* that had the ability to communicate with ancestors, perform human sacrifice, and bring rain (Hermann Lejarazu 2009).

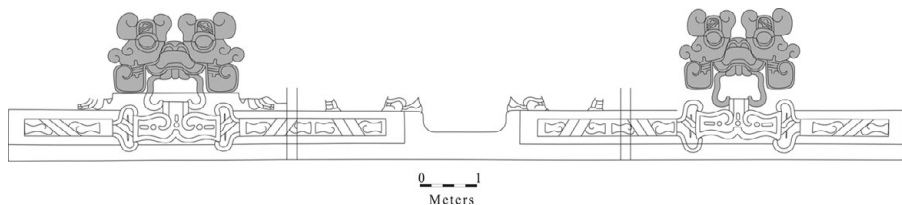
The semiotics and spatial arrangement of architecture, iconography, and epigraphy resembled that of ceremonial centers at other Mesoamerican cities (Ashmore 1991; Sugiyama 1993), where the cosmos was rotated onto the surface of the site such that north represented the celestial realm and south the earth or underworld (Joyce 2000). The southern end of the plaza contained

references to sacrifice, warfare, ancestors, and the underworld as represented by two programs of architectural sculpture. The first was displayed on the façade of Building L-sub, which contained more than 300 carved orthostats. Javier Urcid (2011a) has used pan-Mesoamerican contextual comparisons to reinterpret the figures in the program as representatives of a ritual organization, ranked by achieved status, who are performing autosacrifice in order to invoke ancestors for purposes of divination, perhaps related to preparations for battle (Fig. 2.3a–c). The cornerstones of the program contain short hieroglyphic inscriptions that refer to human sacrifice associated with the accession of rulers (Fig. 2.3d). The second semasiographic program consists of at least sixty-eight finely incised slabs whose original location is unknown, although most were later reset in the walls of Building J (see, for an example, Fig. 2.3e). This program may refer to revered ancestors, all of whom are identified with a place glyph that signifies a single place, probably Monte Albán (Urcid and Joyce 2014: 157–164; also see Carter 2017). A possible corner stone (Monument J-41) depicts the only portrait of a ruler known for this period; the ruler is shown performing human sacrifice through decapitation while dressed in the guise of the Rain Deity (Fig. 2.3f). In contrast to the programming of the southern end of the plaza, a frieze associated with a probable sunken courtyard on the North Platform (Acosta 1965: 815) included graphic references to aquatic themes and featured shells, bands of flowing water, rain, and possibly the Rain Deity (Fig. 2.4; Urcid 1994a).

The association of sacrificial practices with allusions to the Rain Deity, water, and ancestors likely referenced the creation narrative (Joyce 2000), which was a salient liturgical and ideological theme in other early Mesoamerican cities. In Mesoamerican creation stories the current world was created through a sacred covenant between humans and the divine, often forged through conflict, whereby people petitioned deities for agricultural fertility and prosperity in return for sacrificial offerings (Freidel et al. 1993: 65–66; Monaghan 1990; Tedlock 1996). Imagery of ritual actors wearing Rain Deity masks suggests that religious specialists who organized and led ceremonies in the plaza would likely have been equated with important actors in creation narratives, especially the Rain Deity (Sellen 2002). If these inferences are correct, cosmogenic ceremonies like human sacrifice and autosacrifice were carried out in a ceremonial center that was an *axis mundi* and vision of the Zapotec cosmos (for comparable strategies in other Mesoamerican cities see Canuto and Estrada-Belli, Chapter 4; Pool and Loughlin, Chapter 3; Stanton and Collins, Chapter 5; and Sugiyama, Chapter 8). Since Monte Albán's Main Plaza was built on the top of an imposing mountain that projected into the sky and was often engulfed in rain, clouds, and mist during the rainy season (Fig. 2.2), it is likely that people considered the entire ceremonial precinct as a mountain of creation and sustenance (Joyce 2020a; see Arroyo, this volume, for attestation of similar ideas in the



2.3. Monumental art from the Main Plaza of Monte Albán: (a) Young adult from the first rank in the lower row of Building L-sub (from Joyce 2010: fig. 5.5c); (b) Elder from the upper rank of Building L-sub (from Joyce 2010: fig. 5.5b); (c) Rain Deity impersonator from the upper rank of Building L-sub (from Joyce 2010: fig. 5.5d); (d) Corner stones with hieroglyphic inscriptions from Building L-sub (from Joyce 2010: fig. 5.5f); (e) Monolith J-7, with inverted head of a revered ancestor; (f) Monument J-41 (from Joyce 2010: fig. 5.6d). Drawings (a), (b), (c), (d), and (f) redrawn courtesy of Javier Urcid; drawing (e) by Elbis Domínguez Covarrubias from Urcid and Joyce (2014: fig. 9.7) in *Mesoamerican Plazas: Arenas of Community and Power* by Kenichiro Tsukamoto and Takeshi Inomata © 2014 The Arizona Board of Regents. Reprinted by permission of the University of Arizona Press



2.4. Reconstruction of Building A-sub frieze from the North Platform at Monte Albán. Shaded areas reconstructed based on the existing imagery. Corners of frieze indicated by vertical double-lines. Drawing and reconstruction courtesy of Javier Urcid and Elbis Domínguez Covarrubias

Valley of Guatemala). Beliefs concerning mountains, which were understood as sources of rain and fertility and places of sacrifice where sky, earth, underworld, and ancestors merged, persist in Mesoamerica religion and cosmology up to the present day.

In addition to its many novel elements, religion during the first several centuries of Monte Albán was also informed by goods and ideas that defined an emerging “high culture” of Mesoamerican nobility, as indicated by patterns of long-distance trade in prestige goods as well as shared styles of architecture, ceramic designs, religious symbolism, and elements of early writing (Caso et al. 1967; Clark 2004; Covarrubias 1946; Guernsey 2011; Joyce 2010: 131–151; Marcus 1992; Urcid 2011a; Winter 2011; also see Guernsey and Strauss, Chapter 9). Although distant political centers such as La Venta, Chalcatzingo, and Chiapa de Corzo were in decline at this time, ideas and practices that defined relations between people and the divine were appropriated from these places and transformed by the people of Monte Albán. For example, Chalcatzingo, like Monte Albán, is aligned along a north–south axis with references to rulers/ancestors in the north and themes of sacrifice and fertility to the south (Grove 1999). Monte Albán also resembled La Venta and Chiapa de Corzo in having large plazas demarcated by a pyramid or tall platform to the north and lower linear mounds on at least one side (Clark 2001). Zapotec hieroglyphic writing and Rain Deity imagery show similarities with Olmec examples from the Gulf Coast (Covarrubias 1946). Rain and cloud symbols found at Monte Albán also occur in earlier iconography at Chalcatzingo and among the Olmec (Sellen 2002: 11; Taube 1996a: 97). The founders of Monte Albán therefore both innovated new religious practices and drew on established traditions from prestigious places elsewhere in Mesoamerica. The focal point of this religion was the Main Plaza.

In this new and very compelling location for human–divine engagement, there was both physical and conceptual space to create novel institutions and large-scale social affiliations (Joyce 2020a; Joyce and Barber 2015). The spatial layout of art and architecture in and around the plaza acted on participants in ways that were simultaneously inclusive and productive of social distinctions. The Main Plaza would have allowed for the involvement of greater numbers of people in public ceremonies. Ceremonial performances where religious specialists and other participants ascended the stairways of public buildings elevated these people above viewers on the plaza creating or reinforcing emergent social hierarchies. Rituals on the summit of platforms adjacent to the plaza, especially in public buildings, would have emphasized and accentuated differences in knowledge, power, and status relative to those denied access. Rituals carried out on the North Platform would have been even more restricted, as were many of the ceremonies involving the burial of earth offerings in buildings around the plaza (Joyce 2020b).

Evidence for large-scale ceremony comes from the eastern side of the Main Plaza and involved the ritual closure of an elaborate stone cistern during the

Nisa phase (100 BCE–200 CE). Large-scale ritual feasting is indicated by circular ovens that contained hundreds of small bowls and extensive evidence of burning (Acosta 1949; Martínez López et al. 1995: 237). As part of the ceremony, offerings were placed in the sediment that covered the cistern and these included the burial of five individuals on a stone-slab pavement accompanied by jade necklaces, flower-shaped earpools, and ceramic vessels, as well as ornaments of jade, shell, and pearl. Two of the interred individuals wore stone mosaic pectorals, including an elaborate jade bat mask. It is rare to find burials at Monte Albán in public settings, which suggests that the interments were those of sacrificial victims. Five ceramic boxes with incised designs depicting the glyph for “water” and images of maize sprouts indicate that the ceremony and perhaps the cistern itself involved the petitioning of deities for rain and agricultural fertility through sacrifice. The evidence suggests that the ritual associated with the closure of the cistern was both dramatic and impressive in scale. Given the exotic nature of the offerings, including the possible sacrifice of five people, the ceremony was probably sponsored by the ruler of Monte Albán, but the scale of the feasting evidence indicates that a large audience was involved as well. The inscriptions on the cornerstones of Building L-sub indicate that human sacrifice accompanied ceremonies involving the accession of rulers (Urcid 2011a).

The social identities of people living in and around Monte Albán were no longer defined just by affiliations with their families and communities but were increasingly enmeshed with the political and religious actors, institutions, and places in the city, especially its Main Plaza. During its first several centuries, Monte Albán was tied to a relatively restricted hinterland by political, economic, and religious practices and institutions (Joyce 2010: 146–151; Minc et al. 2016: 42–43). By the Pe phase, approximately three quarters of the valley’s population had concentrated within 20 km of the city (Kowalewski et al. 1989). Beyond this area, evidence suggests that people were not aligned with Monte Albán. Differences in monumental architecture, imagery, and a paucity of elaborate cream ware ceramics manufactured at Monte Albán suggest that the sites of El Mogote and, later, El Palenque in the Valle Grande, as well as Yegüih and Dainzú in the Tlacolula arm, were independent communities (Redmond and Spencer 2006: 347–350; Urcid 2014). Evidence also indicates that El Mogote, El Palenque, and Dainzú periodically fought battles with Monte Albán.

The concentration of people near Monte Albán was motivated by a desire to take advantage of the ceremonial and economic opportunities offered by the city. The most important ties between Monte Albán and its hinterland involved the novel religious practices and deities as well as the dramatic ceremonial setting that drew people to the Main Plaza. Elites at Monte Albán also provided access to prestige goods including greenstone, shell, and onyx ornaments and exotic non-local pottery (Winter 1984). In return for the

religious, administrative, and economic services of Monte Albán's leaders, people probably provided taxes, in the form of crops, to provision those living on the infertile hillslopes of Monte Albán, as well as labor for the construction of monumental buildings (Kowalewski et al. 1989: 123–126; Marcus and Flannery 1996: 149–150). The data do not suggest that rulers directly controlled key utilitarian resources such as land and there is no evidence that they controlled the production of locally made prestige goods until the Nisa phase (see below, as well as Fargher 2007; Minc et al. 2016; Parry 1987; Whalen 1988).

The religious innovations of the early years of Monte Albán benefited the nobility and contributed to rising inequality and the separation of noble and commoner identities (Joyce 2010: 141–146; Marcus and Flannery 1996). Archaeological evidence indicates, however, that both newer forms of hierarchical authority and more traditional forms of communal leadership vied for political influence (Joyce 2010: 155–159; Urcid and Joyce 2014). In fact, hereditary status distinctions in the Valley of Oaxaca are clearly evident only a century or two prior to the founding of Monte Albán (Blanton et al. 1999: 36–42; Joyce 2010: 111–114; c.f. Marcus and Flannery 1996: 93–110) and even after the city's establishment, residential and mortuary data indicate that commoners could acquire significant wealth and power (Joyce 2010: 141–146; Urcid 2011a). Public settings like the Main Plaza stressed a corporate identity, while muting representations of rulers (Joyce 2000, 2004; Urcid and Joyce 2014). Although nobles lived near the ceremonial precinct and directed public rituals, as discussed above, only a single possible Formative period ruler's portrait has been discovered at the site. Rulers were referenced in the hieroglyphic inscriptions on the Building L-sub cornerstones, but these texts were probably understandable only to the literate nobility (Urcid 2011a). There were no known high-status residences directly on the plaza until the Nisa phase. Instead, the plaza emphasized public buildings, public spaces, and cosmic symbolism rather than the exclusionary power of rulers (Joyce 2000, 2004). Urcid's (2011a) analysis of the Building L-sub orthostats raises the possibility that early rulers shared political authority with non-noble, communal institutions. The Building L-sub orthostats depict low-status individuals on the lower façade; Urcid (2011a) argues that representations of higher-status elders and Rain Deity impersonators appeared on the upper levels of the façade and on the walls of superstructures. The large number of ancestors depicted on the incised slabs later reset in Building J also suggests a degree of inclusivity (Urcid and Joyce 2014).

By the Nisa phase, the rulers of Monte Albán increasingly exerted control over the Main Plaza as well as the production of prestige goods and the use of coercive force. Access to the Main Plaza was increasingly closed-off and at least one control point may have been present (Joyce 2010: 155–159). Noble residences were being built directly on the plaza (Winter 2001) and may have

been more “public,” with their occupants more closely involved in political administration and religious ceremony. Rulers at Monte Albán were also successful in gaining control over the manufacture of social valuables through which debts and obligations could be established and political institutions funded. These items included fancy cream ware ceramics whose distribution was markedly status linked, as well as shell ornaments and possibly obsidian blades (Elson and Sherman 2007; Kowalewski et al. 1989: 180, 199; Markens and Martínez 2009; Minc et al. 2016). The rulers of Monte Albán also had recourse to coercive force to bring communities in the valley into compliance. For example, although I question the degree to which areas outside the valley were conquered (Joyce 2014), there is evidence that the site of El Palenque was defeated and became more closely aligned with Monte Albán (Redmond and Spencer 2006). A semasiographic program at Dainzú, however, references the defeat and capture of a ruler of Monte Albán by a ruler of Dainzú (Urcid 2014), which suggests that warfare may have been relatively small in scale and focused on elite status competition (Joyce 2014).

Although Nisa phase developments strengthened the authority of Monte Albán’s rulers, they may have exacerbated tensions with communal forms of leadership. The settings in which hereditary nobles and communal organizations negotiated and contested political authority probably included public rituals, tomb ceremonies, rituals involving earth offerings, activities related to the preparation for and conduct of warfare, and occasions requiring access to special ceremonial roles like Rain Deity impersonator (Joyce 2020a; Joyce and Barber 2015). Evidence from the end of the Terminal Formative suggests that these tensions may have erupted in a political upheaval at Monte Albán. At this time the semasiographic programs were dismantled (Urcid 2011a; Urcid and Joyce 2014), a temple on the North Platform was burned (Winter 1994a: 15), a defensive wall was built (Blanton 1978), and an access point onto the Main Plaza was forcibly monitored (Joyce 2010: 159). Since the semasiographic programs downplayed the power of rulers and in the case of Building L-sub probably represented communal forms of leadership, their dismantling and destruction may directly reflect the suppression of communal authority that had existed alongside the hierarchical rulership of the polity. By the Early Classic, evidence for the increasing formalization of status distinctions as well as imagery and writing celebrating rulers suggest that more exclusionary and hierarchical forms of authority had gained prominence over competing forms of leadership.

MIXTEC URBAN CENTERS

Between 400 and 300 BCE, people in the Mixteca Alta relocated to urban or proto-urban hilltop centers at Yucuita, Monte Negro, Cerro Jazmín,

Etlatongo, and Huamelulpan (Balkansky 1998; Balkansky et al. 2000; Blomster 2004; Kowalewski et al. 2009: 297–303; Pérez Rodríguez et al. 2011; Winter 1994b). These Terminal Formative period (300 BCE–300 CE) Mixtec cities ranged from 78 to 212 ha with populations of several thousand (Plunket 1983). Like Monte Albán, the sites of Monte Negro, Cerro Jazmín, and Huamelulpan seem to have been intentionally founded. Large sites near Huamelulpan and Monte Negro, including Tayata, Peñasco-Tlacotepec, and La Providencia, were depopulated and probably were the source of the founders and first occupants of these early cities. At Cerro Jazmín, excavations of burials in a residence dating to the founding period suggest that the initial residents may have brought the remains of ancestors when they arrived at the site (Pérez Rodríguez et al. 2018: 205). Yucuita and Etlatongo grew from pre-existing communities into demographic centers probably due to immigration from nearby sites. In much of the Mixtec highlands, total population increased with estimates more than doubling by the Ramos phase (300 BCE–300 CE; Kowalewski et al. 2009). In the Tilantongo area, however, existing communities founded Monte Negro without significant population growth (Balkansky et al. 2004: 44–46).

Population growth in the Mixteca Alta was supported by the expansion of agricultural terrace systems including both cross-channel (*lama-bordo*) and hill-slope terraces (Balkansky et al. 2004; Pérez Rodríguez et al. 2011). Thousands of these terraces are associated with later Formative period sites, although their dating through surface survey has proven to be unreliable (Borejsza et al. 2008). More reliable associations are provided by cross-channel terraces exposed in incised drainages (Leigh et al. 2013; Mueller et al. 2012; Pérez Rodríguez and Anderson 2013) and through archaeological excavations (Pérez Rodríguez 2006). Terraces were constructed at the household level, rather than through labor organized by rulers (Pérez Rodríguez's 2006).

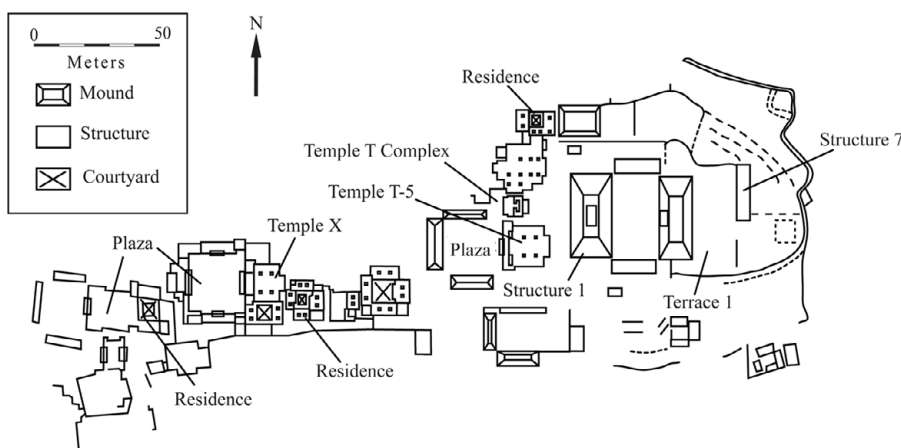
Monumental architecture in early Mixtec cities indicates a degree of labor mobilization that may have been organized by community leaders (Acosta and Romero 1992; Gaxiola 1984; Pérez Rodríguez et al. 2017a; Winter 1982; Winter et al. 1991). Iconography, epigraphy, trade in prestige goods, and some aspects of monumental architecture such as I-shaped ballcourts show that elites in the Mixteca Alta participated in an emerging elite culture shared with other regions of Mesoamerica, especially the Valley of Oaxaca (Joyce 2010: 173–177; Winter 1994b). Mortuary patterns and residences indicate, however, that differences in wealth, status, and power were not as great as in the Valley of Oaxaca (Joyce 2010: 160–179).

Excavations at Yucuita, Huamelulpan, Cerro Jazmín, and Monte Negro show that religion was important in the founding of these urban centers. Early centers in the Mixteca Alta did not have a single focal public space like the Main Plaza at Monte Albán or the acropolis at Río Viejo (see below)

(Balkansky et al. 2004; Joyce 2010: 163–173; Pérez Rodríguez et al. 2011: 88). Instead, Mixtecs built cities with multiple public areas often surrounded by clusters of residences that constituted some form of corporate group organization consisting of families of different status levels. This arrangement of public space and residences has been termed the multiple-nuclei pattern (Balkansky et al. 2004: 47) and resembles Kenneth Hirth's (2003) *altepetl* model of urbanism (see Love, Chapter 1). Public facilities in Mixtec cities were also less monumental than at Monte Albán and Río Viejo, although they still would have required significant labor expenditures (Pérez Rodríguez 2015; Winter et al. 1991). The multiple-nuclei pattern suggests that political authority was vested in multiple corporate groups within each city, rather than in the hands of exclusionary rulers, although Verónica Pérez Rodríguez and colleagues (2017a, b, 2018) argue for a short period of exclusionary authority shortly after the founding of Cerro Jazmín. Corporate groups may have been historically derived from the different communities that founded the demographic centers or could have been versions of the neighborhood organization found at the time of the Spanish conquest (see M. E. Smith 2010).

The corporate pattern is most clearly represented at Yucuita and Monte Negro. At Yucuita, Marcus Winter (1982: 20–21) excavated a monumental platform with a retaining wall 5 m high that supported probable public buildings, although there is no evidence for a sizeable plaza where ceremonies could have engaged large groups of people. Instead, modest plazas up to 672 m² were found in two other areas of the site that appear to have been public spaces for corporate groups (Fernández 1981; Robles García 1986, 1988; Winter 1986). One or two higher status residences were located adjacent to the plazas and in one case a possible public building was located nearby. Clusters of lower status residences surrounded these areas.

At Monte Negro, at least four corporate complexes have been identified consisting of concentrations of public buildings and high-status residences (Acosta and Romero 1992; Balkansky et al. 2004), while lower-status houses were located on terraces on the slopes below. Each complex consists of a small plaza measuring between 400 m² and 700 m², surrounded by public buildings constructed on low platforms including at least one temple (Fig. 2.5). The temples ranged in size from 56 m² to 160 m² and had plaster floors, broad stairways, and doors with roofs supported by columns. Some temples displayed altars and offering basins or niches, and ritual paraphernalia included anthropomorphic urns and obsidian knives. Carved into the risers of steps on one of the temples was the circle-and-triangle blood glyph (see, however, Geurds and Jansen 2008: 407–409). In several instances, elite residences were connected to temples by roofed passageways, indicating a close association between high-status people and politico-religious buildings. Another indication of this



2.5. Plan of civic-ceremonial center of Monte Negro showing the multiple-nuclei pattern. After Joyce (2010: fig. 6.2)

association is the adobe tombs and burials beneath the floors of some temples as well as in high-status residences (Acosta and Romero 1992).

At Cerro Jazmín, five Terminal Formative period ceremonial areas have been located, although most have been badly damaged by agricultural activities and looting (Pérez Rodríguez et al. 2011, 2017a). One is the Tres Cerritos area, which consists of a large platform on which three mounds surrounding a small plaza were built; the largest mound reached 6–7 m in height. The Tres Cerritos sector may have been much larger based on the remains of buildings, platforms, and possible plazas found to the west, although these were badly damaged by plowing and the history of their use is uncertain. The best preserved and studied public area at the site is the Sunken Patio Sector located near the summit of the mountain in a restricted setting reached through a formal access way (Pérez Rodríguez et al. 2017a). The sector consists of two platforms on which superstructures were built, each facing a sunken patio. Excavations in the southern platform-patio complex yielded evidence for ritual feasting including ovens, refuse deposits, and high proportions of serving vessels. During the Early Ramos phase (300–100 BCE), feasting involved smaller groups and more exotic foods with a high proportion of luxury ceramics that were imported from the Oaxaca Valley or that imitated Oaxaca Valley ceramics. At ca. 100 BCE, the main structures of the Sunken Patio Sector were intentionally burned either as a result of termination rituals, or conflict. Following the burning, the scale of feasting increased, feasting foods were less exotic, and pottery imported from or inspired by the Valley of Oaxaca declined. Pérez Rodríguez and colleagues (2017a) argue that this reflects a shift from a more exclusionary to a more corporate form of authority. This transition may have been the outcome of tensions between emerging

elites and the populace that perhaps culminated in conflict and the burning of the Sunken Patio Sector, with authority then becoming more inclusive with status perhaps linked to corporate-group membership. Evidence from excavations in a high-status house located near the Tres Cerritos area indicates that the residents went through a period of hardship during the transition period, but by the end of the Ramos phase, the household had recovered and was prospering due to an increasing involvement in craft production (Pérez Rodríguez et al. 2018).

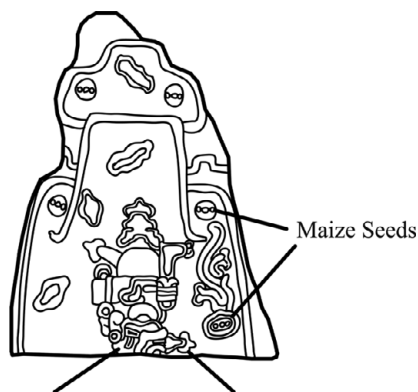
At Huamelulpan, public spaces were not as clearly associated with high-status residences and were larger in scale than at Yucuita, Monte Negro, and Cerro Jazmín. Huamelulpan was the largest of the later Formative period Mixtec urban centers reaching 212 ha by the Late Ramos phase (Balkansky 1998). Perhaps not surprisingly, Huamelulpan also has the largest-scale public spaces recorded for the Mixteca (Gaxiola 1984; Winter et al. 1991). A public plaza on the summit of Cerro Volado, the highest part of the site, measures 100 m \times 50 m and is flanked by two monumental structures. Based on surface collections, Andrew Balkansky (1998: 50–51) dates the plaza complex to the Ramos phase, although Winter and colleagues (1991: 8–9) argue that it is primarily Classic period. A plaza of this size would have been able to host thousands of participants during ceremonies, probably drawing in people both from Huamelulpan and surrounding communities. Another Ramos phase public area surrounded by residential terraces is the Grupo de la Iglesia with two large plazas located on a hilltop in the southeastern end of the site. Plaza 1 measures 1,600 m² and is demarcated on its northern, eastern, and southern sides by monumental buildings. A monumental stairway descends from Plaza 1 to Plaza 2, which covers 4,000 m² and has an adoratorio or altar in its center. Directly west and beneath Plaza 2 is an I-shaped ballcourt. A third ceremonial area is the Grupo al Poniente de la Iglesia, which included at least three large platforms along with a sunken patio and an altar (Gaxiola 1984: 47–55). Builders used huge stone blocks to construct the platform corners and some were carved with hieroglyphic inscriptions (Fig. 2.6). Margarita Gaxiola (1984: 51–52) discovered a stone altar, the Altar de los Cráneos, adjacent to the southeastern end of this complex. Four skulls, each with holes drilled in the forehead for suspension, were found with the altar as well as an offering of ceramic urns, braziers, jars, and bowls probably related to ritual feasting as well as shell and serpentine pendants and a greenstone axe. Some urns had images of the Rain Deity similar to those found in the Oaxaca Valley. The suspension of skulls in Mesoamerica is associated with both the display of sacrificial victims and the veneration of ancestors (Christensen and Winter 1997).

A variety of ritualized practices were likely carried out in the public areas at Mixtec urban centers. Evidence for ritual feasting has been discovered in the Sunken Patio Sector at Cerro Jazmín (Pérez Rodríguez et al. 2017a) as well as



2.6. Monumental cornerstone at the site of Huamelulpan carved with hieroglyphic inscriptions. Photo by author

in Plaza 1 of the Grupo de la Iglesia (Winter et al. 1991) and, perhaps, at the Altar de los Cráneos at Huamelulpan (Gaxiola 1984). Monumental art also suggests that sacrifice, fertility, and the sacred covenant were salient themes in religious ceremony in the Mixteca Alta (Urcid n.d.), as they were at Monte Albán, Río Viejo, and elsewhere in Mesoamerica. Yucuita Monument 1 depicts a representation of the Rain Deity with blood issuing from the mouth as in autosacrifice (Fig. 2.7). Above are maize motifs, along with what may be an image of a mountain of sustenance with depictions of maize at various stages of growth from seeds to mature plants. Similarly, Monument 3 from Huamelulpan depicts a named person in the guise of the Rain Deity silhouetted on a hill glyph perhaps representing a mountain of creation and sustenance. The Altar de los Cráneos at Huamelulpan could have indexed either human sacrifice or ancestor veneration and the blood glyph on the temple stairway at Monte Negro likely referenced sacrificial blood. In fact, similarities in Rain Deity imagery,



Representation of the Rain God in Profile Blood Glyph

2.7 Yucuita Monument 1. Representation of the Rain God, with blood issuing from mouth, and depictions of maize at various stages of growth. Drawing courtesy of Javier Urcid

hieroglyphic writing, anthropomorphic urns, and some features of monumental architecture indicate communication involving religion between the Mixteca Alta and the Valley of Oaxaca. Yet the layout of public architecture and space as well as the nature of political organization in the two regions were quite distinct (Joyce 2010: 173–177).

Although there is no doubt that communities like Huamelulpan and Yucuita were places of political and religious authority, based on current evidence, the ways in which hinterland communities were tied to the urban centers is less clear. With the possible exception of the Cerro Volado plaza at Huamelulpan, and perhaps the area of plowed architecture near Tres Cerritos at Cerro Jazmín, Mixtec urban centers appear to lack a centralized ceremonial area where people from the city and hinterland communities could have engaged in large-scale rituals and other activities. In some parts of the Mixteca Alta, particularly the area around Monte Negro, the founding of urban centers significantly de-populated surrounding communities (Balkansky et al. 2004: 44–46). In other centers, like Yucuita, people from outlying communities may have participated in public rituals, although the scale of ceremonial spaces was relatively limited (Gaxiola 1984; Joyce 2010: 163–165; Winter 1982). Debts and obligations may have been created in the hinterland through the exchange with urban elites of prestige goods including greenstone, shell ornaments, and elaborate pottery (Acosta and Romero 1992; Fernández 1981; Gaxiola 1984; Joyce et al. 2006; Pérez Rodríguez et al. 2017a, b). Likewise, evidence from Cerro Jazmín suggests the possibility of specialized production of ceramics, textiles, shell ornaments, bone artifacts, and lithics (Navarro Rosales 2016; Pérez Rodríguez 2015; Pérez Rodríguez et al. 2011, 2018), which could have created a degree of economic dependency for other communities. The lack of excavations at smaller sites in the Mixteca Alta makes it difficult to assess political, religious, and economic relations with cities from the perspective of the hinterland, however.

Warfare may have drawn people from outlying communities to cities for protection and there is evidence for walls built around parts of Huamelulpan and Yucuita. The existence of large-scale warfare is questionable, however, and conflict appears to have been typically an element of elite status competition (Joyce 2014). The leading families of Mixtec centers may have mobilized tax payments from the hinterland in the form of agricultural surpluses and labor for the construction of public buildings, although again evidence is lacking, and with the exception of Huamelulpan and perhaps Cerro Jazmín, the scale of monumental architecture is relatively modest. The pattern of multiple corporate groups, each with their own leaders, may also mean that people in the hinterland were affiliated with a specific corporate organization rather than with the urban center as a whole.

Overall, based on the current evidence, there seem to have been few ties between Mixtec cities and their hinterlands. One might even question whether these sites should even be considered urban. I should be clear, however, that I find it difficult to imagine that places like Yucuita, Huamelulpan, and Cerro Jazmín were not urban given their public architecture, monumental art, concentrated populations, and leading families. The capacity of rulers and affiliated political institutions to integrate hinterland populations was almost certainly less than in the Valley of Oaxaca, however. The corporate form of political organization suggested by the multiple-nuclei pattern of public architecture might also have increased the potential for factionalism. The relative weakness of Mixtec cities as polity centers may explain why virtually all of them declined by ca. 300 CE (Balkansky 1998; Balkansky et al. 2004; Gaxiola 1984; Pérez Rodríguez et al. 2017a; Winter 1994b).

RÍO VIEJO

The later Formative period in the lower Río Verde Valley, as in the Mixteca Alta and the Valley of Oaxaca, was a time of population growth, increasing social inequality, urbanism, and the construction of monumental buildings (Joyce 2010, 2013). The first urban center in the region emerged by 100 CE at Río Viejo, located just west of the river on the floodplain. The site increased dramatically from 25 ha during the Late Formative Minizundo phase (400–150 BCE) to 225 ha by the early Terminal Formative Miniyua phase (150 BCE–100 CE), reaching an estimated population of 8,500 people. Population at Río Viejo increased due largely to immigration from other communities in the region, particularly those in piedmont and secondary valley settings (Hedgepeth Balkin 2020). Beginning in the Late Formative period, people at Río Viejo incrementally constructed massive residential and multi-use platforms that elevated residences above floodwaters during seasons with severe inundations. As the area and elevation of these platforms were gradually expanded, they would have become increasingly effective as protection against floodwaters, making it easier for people to live on the agriculturally productive floodplain. This may have been one impetus for resettlement to the site, especially by people living in less fertile piedmont and secondary valley settings.

Evidence suggests that the rulers of Río Viejo mobilized labor for the construction of monumental architecture and in return provided political and religious services (Joyce and Barber 2015; Joyce et al. 2013, 2016). By the late Terminal Formative period Chacahua phase (100–250 CE), the city's largest building and its ceremonial center was the acropolis, which for its construction probably required workers from beyond Río Viejo itself.

The acropolis covered approximately 7 ha with a minimum estimated volume of 455,000 m³. It consisted of a platform, rising at least 6 m above the floodplain, which supported two large substructures (Structures 1 and 2, respectively) that each stood at least 16 m high. On the southern end of the acropolis the platform descended to a probable plaza enclosed by a 5–7 m tall platform or platforms that were probably continuous with the main part of the acropolis. The use of this space cannot be definitively determined, however, because Formative period occupational surfaces are now below groundwater.

Much of the construction fill of the acropolis demonstrates a variety of labor-intensive earthen building techniques, including rammed earth, sheet fills, and two types of fill utilizing adobe blocks along with unconsolidated basket-loads of sediment. The variability in construction was mirrored in more formal architectural features, especially retaining walls, which included adobe bricks and stone masonry. The variability in construction is consistent with an interpretation that people from different communities with divergent building traditions participated in raising the acropolis. We have found these construction techniques at other sites in the region, although in none of these cases were as many different techniques used as on the Río Viejo acropolis (Joyce et al. 2016: 70–71).

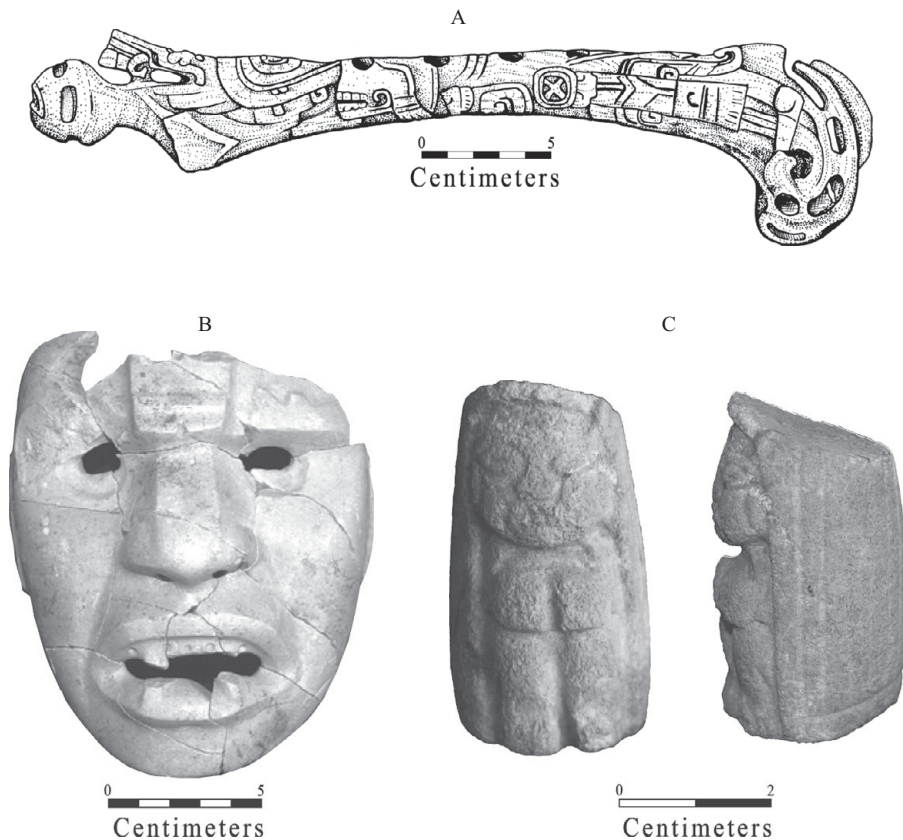
In addition to the construction of public facilities, people were drawn to the acropolis for religious practices, both collective and exclusive (Joyce and Barber 2015; Joyce et al. 2016). Large groups of people were brought together for ritual feasting as demonstrated by large feasting middens and an earth oven. Ten refuse deposits were recovered on the south and west sides of the acropolis, including nine that were deposited in pits excavated into construction fill. The two largest pits were more than a meter-and-a-half deep and one was more than 4 m in diameter. The middens contained ash, thick lenses of estuarine mussel shell, deer, dog, dense deposits of sherds, and organic sediments (Barber and Joyce 2016). The lack of domestic architecture and other features and artifacts normally associated with residences indicates that the middens were formed as the result of non-domestic commensal activities on the acropolis. At least some of the food consumed at feasts was probably prepared in an earth oven discovered at the base of Structure 2. Refuse from the oven covered an area with a diameter of at least 10 m. Despite its large size, it is unlikely that the oven was sufficient to cook all of the foods used in feasting, and the absence of storage facilities on the acropolis indicates that food was brought to the acropolis by people attending feasts.

More exclusive and elaborate ritual spaces were located on top of Structure 2 (Joyce 2006). Structure 2 was a large, stepped platform that supported an adobe superstructure that had remnants of the only architectural stucco ever found in the valley and a stone retaining wall that would have supported a narrow, elevated platform. The absence of domestic artifacts or refuse in

association with Structure 2 indicates that it was a public building, possibly a temple. Other platforms that supported wattle-and-daub buildings were also likely sites of more exclusive activities.

Although mortuary and residential data from excavations at outlying sites demonstrate inequality (Barber 2013; Barber et al. 2013; Joyce et al. 2016), evidence for the nature of rulership and political authority at Río Viejo has proven difficult to come by, even with the extensive excavations on the acropolis. We have found no domestic architecture that might indicate the location of a ruler's residence. There are no tombs or elaborate burials of nobility and we have yet to find stone monuments with the portraits of rulers from this period. Instead, we see evidence for regional political authority in the distribution of the population, in the coordination required to underwrite monumental construction, and in the sponsorship of large-scale ritual feasts on the acropolis.

A small number of portable iconographic objects suggests that elites in the region consumed some of the objects, imagery, and liturgical narratives that constituted the high culture of urban elites elsewhere in Mesoamerica, including the sacred covenant between humans and the divine (Barber and Olvera Sánchez 2012; Brzezinski et al. 2017; Joyce 2020b). Although these objects were recovered from restricted public settings at outlying sites, they offer indications of religious practices that may have drawn people to Río Viejo's acropolis. They also indicate that elites had specialized ritual roles. At the site of Yugüe, a high-status religious specialist was interred in a cemetery holding an elaborate incised bone flute (Barber and Olvera Sánchez 2012). The flute's incised imagery, and its references to maize, rain, and wind, indicate that the instrument, when played, instantiated an animate entity whose breath or voice manifested an ancestor impersonating the Rain Deity for purposes of agricultural fertility (Fig. 2.8a). Incised imagery on a gray ware bowl found in an offering in a restricted public building also at Yugüe depicted a regional variant of a *Xicani*, a high-status sacrificial specialist who wears a mask with a long, upturned snout and who also appears in imagery in the Oaxacan Highlands (Brzezinski 2011: 107–109). At Cerro de la Virgen, an unusual offering placed beneath a restricted public building included a broken but nearly complete stone Rain Deity mask, and fragments of a second mask, a small stone figure, and two miniature stone thrones (Fig. 2.8b, c; Brzezinski et al. 2017). The stone figure exhibits a “mantle,” which covers the back of the human figure and resembles the silk and husk of a maize cob, suggesting an image of personified maize. All of the stone objects with the exception of the figurine were intentionally broken during or prior to their interment, perhaps as an act of sacrifice designed to transfer their life force to the building (see Stross 1998). Together, the Rain Deity mask, figurine of personified maize, and allusion to sacrifice likely reference the sacred covenant (Joyce 2020b). The imagery on



2.8 Portable art from the lower Río Verde Valley: (a) Bone flute from the Yugüe cemetery (from Joyce 2010: fig. 6.12; drawing courtesy of Sarah Barber); (b) Rain Deity mask from the offering at Cerro de la Virgen (from Joyce and Barber 2015: fig. 5; photo courtesy of Jeffrey Brzezinski); (c) Figurine of personified maize from the offering at Cerro de la Virgen (from Joyce 2020b: fig. 11.12; photo courtesy of Jeff Brzezinski)

the stone objects from Cerro de la Virgen, if not the objects themselves, also indicate the exchange of ideas with distant regions, including possibly the highlands of Oaxaca as well as the Pacific Coast and highlands of southern Mexico and Guatemala. The lower Río Verde Valley, however, appears somewhat less engaged with broader patterns of elite interaction across Mesoamerica relative to urban centers in the Valley of Oaxaca and Mixteca Alta.

Despite the scale of communal construction and feasting on the Río Viejo acropolis, evidence from outlying sites suggests that practices of affiliation at the regional level did not result in significant economic, political, or religious dependencies between city and hinterland or an overarching political identity centered on Río Viejo and its rulers (Barber 2013; Joyce 2020b; Joyce and Barber 2015). There are few indications at present of political or economic practices, such as markets, craft specialization, or defensive concerns, which

would have linked people from Río Viejo with surrounding communities. Evidence from outlying sites also suggests considerable independence in ritual practices. Site orientations, including those of public buildings, varied from site to site as did architectural layouts and construction techniques (Barber 2013; Brzezinski 2019; Joyce 1991; Joyce et al. 2013, 2016; Winter and Joyce 1987; Workinger 2002). Data from public buildings at Río Viejo, Yugüé, San Francisco de Arriba, and Cerro de la Virgen suggest variation in public rituals (Barber 2013; Barber et al. 2014; Brzezinski 2019; Joyce and Barber 2015; Workinger 2002). The evidence therefore indicates that, while there was a regionally shared set of ideas regarding how communities were defined, there were clear distinctions among sites in the materials and practices through which specific community identities were instantiated.

Authority and identity were instead focused on local communities in contrast to the multiple-corporate group pattern suggested for the Mixteca Alta and the more centralized and hierarchical pattern seen in the Valley of Oaxaca (Joyce 2010, 2020b; Joyce and Barber 2015). Beginning as early as the Minizundo phase, if not earlier, people at both large and small sites created socially meaningful places through the construction and use of shared public spaces and monumental facilities that embedded collective actions and histories in specific locations (Barber and Joyce 2007). The scale of monumental construction was considerable, even at some smaller sites such as Yugüé where a multi-use platform was built that measured 300 m × 150 m × 10 m high (Barber 2013). Communal ceremonies carried out on public buildings included mortuary rituals associated with cemeteries and ritual feasting. Large earth offerings sequentially placed in public buildings at Yugüé, Cerro de la Virgen, and San Francisco de Arriba also suggest communal participation in novel practices designed to sustain public buildings as animate, divine beings (Joyce and Barber 2015). The most elaborate offering comes from Cerro de la Virgen where 260 whole vessels were placed in stone compartments in a public building adjacent to the site's main plaza (Brzezinski 2019).

Although elites at outlying sites were increasingly distinguishing themselves from others through mortuary practices, prestige goods, and elaborate residences, local leaders were still strongly tied to their communities (Barber 2013; Barber and Joyce 2007; Joyce 2020b; Joyce and Barber 2015). Social valuables obtained through long distance exchange linked lower Verde elites to those in other parts of Mesoamerica and contributed to the creation of a high-status identity. However, the deposition of such materials in nondomestic contexts, such as ritual caches and cemeteries, converted valuable items into collective resources, thereby transforming hierarchical social distinctions into expressions of traditional communal principles. Cached valuables thus became inalienable objects that materialized corporate identities and histories (Barber et al. 2014). The interment of high-status people in community cemeteries further

highlighted elites' membership in a local collectivity (Barber et al. 2013). The evidence suggests that rulership and hierarchy were embedded in and constrained by communal principles, practices, and obligations.

Overall, the evidence suggests that people from different communities in the region participated in the construction and use of the acropolis, and rulers of Río Viejo gained some degree of political influence over multiple communities at least for a time (Joyce and Barber 2015; Joyce et al. 2016). These multi-community links, however, were tenuous and unstable because of the obligations that both elites and commoners had to their local communities. These obligations included the work of caring for and sustaining divine beings, expressed in the form of public buildings, as well as obligations to other people created through ritual feasting. Political authority in the region was not singular and it is likely that newer, more regional and hierarchical forms of authority at Río Viejo existed alongside traditional, community-based, and less hierarchical leadership in the outlying communities. Points of tension and negotiation probably surrounded issues such as participation in feasts and other rituals on public buildings, and the centrality of regional rulers relative to local communities in important ceremonies. We suspect that while Río Viejo was the most powerful political center in the region, people of other communities had considerable independence. Although regional integration appears to have been weak, we see more evidence for urbanization and the creation of political and ritual ties to outlying communities than in the Mixteca Alta. Like the early urban centers in the Mixteca Alta, however, Río Viejo's durability as a city and polity seat was short-lived (Joyce 2010). By 250 CE, the polity collapsed, Río Viejo declined in size, and the acropolis was abandoned.

CONCLUDING THOUGHTS

As with all of the early urban centers discussed in this volume, important factors in the initial attraction of people to early cities in Oaxaca included innovative and compelling religious practices and places. Evidence from all three regions discussed in this chapter indicates that people adopted a suite of religious themes related to the sacred narrative of cosmic creation and renewal involving the Rain Deity, fertility, and sacrifice. Elements of these religious themes were also present at Kaminaljuyu, in the Maya Lowlands, along the Pacific slope and coast of southern Mesoamerica, and at Teotihuacan. Some of the religious foundations on which later Formative period Mesoamerican urban centers were established had a deep history (for examples, see Canuto and Estrada-Belli, [Chapter 4](#); Pool and Laughlin, [Chapter 3](#); Stanton and Collins, [Chapter 5](#)), and it is possible, in some regions, to trace the themes of cosmic creation and renewal through sacrifice back to earlier political and religious centers like La Venta, La Blanca, Chalcatzingo, and San José Mogote

(e.g., Guernsey and Love 2005; Joyce 2000; Taube 1996a). In many places, however, later Formative urban centers emerged suddenly and involved innovations in the intertwined fields of religion and politics (e.g., see Love, Chapter 1; Love and Rosenswig, Chapter 7; Sugiyama, Chapter 8). In all three regions of Oaxaca, the archaeological record indicates that urban settlements grew rapidly either due to population growth at preexisting settlements, as with Río Viejo and Yucuita, or through the founding of new communities, as with Monte Albán, Monte Negro, and Cerro Jazmín. From their beginnings, these later Formative cities were focused on ceremonial spaces that brought together more traditional religious practices with novel ones, some of which were likely adopted through interaction with other regions (see Joyce 2000, 2020b; Joyce and Barber 2015).

Whether focused on the concept of the Water Mountain as at Kaminaljuyu (Arroyo, Chapter 6), the Maya E Group (Canuto and Estrada-Belli, Chapter 4; Stanton and Collins, Chapter 5), or the sacred geography of Teotihuacan (Sugiyama, Chapter 8), religion drew people to emerging urban centers creating new social affiliations and interdependencies both within cities and with people in the surrounding countryside. Religion was also fundamental to the ruling ideologies of these early urban centers (Guernsey and Strauss, Chapter 9; Love and Rosenswig, Chapter 7). Yet, as emphasized in this chapter, integration and hierarchy at urban centers did not simply unfold in an unproblematic fashion largely driven by the interests and agendas of rulers. Instead, urban formations involved negotiation, contestation, and at times conflict among the diverse people and collectivities that constituted early cities (Love, Chapter 1; Pool and Laughlin, Chapter 3; Stanton and Collins, Chapter 5). Certainly, Formative period political developments at Teotihuacan (Cowgill 1997), and the emergence of the institution of Maya divine kingship out of the more communal ideologies of the Middle Formative period (Canuto and Estrada-Belli, Chapter 4), did not proceed without some degree of conflict and negotiation.

In all three regions of Oaxaca, political organization in early cities involved communal forms of authority that were characteristic of their founding populations, although both Cerro Jazmín and Monte Albán exhibited a degree of exclusionary authority that existed in tension with communal leadership. Evidence indicates, however, that there was considerable variability across these regions in degrees of urbanity and specific forms of political organization. In the lower Río Verde Valley, identity focused on communities, while in the Mixteca Alta it was focused on multiple corporate groups. In the Valley of Oaxaca, the first few centuries of Monte Albán seem to have involved a form of power sharing negotiated between hierarchical elites and more traditional, communal forms of leadership. The diversity of later Formative period urban formations in Oaxaca, like those on the Gulf Coast (Pool and Laughlin,

Chapter 3) and in the Soconusco (Love and Rosenswig, Chapter 7), stands in sharp contrast to the cultural homogeneity described by Canuto and Estrada-Belli (Chapter 4) for early urbanism in the southern Maya Lowlands.

Based on current evidence, early urban centers in Oaxaca had relatively small hinterlands that were weakly integrated. To the degree that practices and institutions created interdependencies between urban center and hinterland, they seem to have been based largely on top-down processes such as taxation, the sponsorship of public rituals, and prestige economies. These cities drew their populations from small catchments, making them relatively homogeneous, which could have limited the synergies potentially created by a diversity of economic roles or large-scale systems of production (as with the hydraulic systems at Kaminaljuyu; see Arroyo, Chapter 6). Perhaps this is why political relations in these cities were contested and most of them were unstable and relatively short-lived. As with many early urban centers in Mesoamerica, life in Oaxacan cities involved social tensions and contradictions between more traditional, communal, and egalitarian forms of social organization and political authority, and emerging hierarchical relationships (e.g., Cowgill 1997; Love 1999a; Pool 2008; Pool and Laughlin, Chapter 3; Sugiyama 1993). Relations between cities and outlying communities also undoubtedly involved social tensions as exemplified by the strong local community affiliations in the lower Verde, which resisted attempts by the rulers of Río Viejo to extend their authority in ways that would have created a scaled-up regional identity centered on Río Viejo. Sarah Barber and I (Joyce and Barber 2015) argue that social ties between Río Viejo and outlying communities were impeded by the material configuration of practices through which local communities were constituted, including the interment of ancestors and earth offerings within public buildings. The only Formative period city in Oaxaca that overcame these issues was Monte Albán, although even here politically charged entanglements involving access to the Rain Deity and the sacred covenant were contested among hierarchical and communal leaders. Even though materialities in the Oaxaca Valley were more conducive to elite appropriation of access to the divine (Joyce and Barber 2015), it still seems to have taken the coercive suppression of communal leadership for hierarchical rulers to prevail. By the Classic period, archaeological evidence shows that a multiplicity of practices and institutions emerged, both bottom-up and top-down, which linked city and countryside in the Oaxaca Valley, although integrative ideas, practices, and institutions were far from stable (Joyce 2010). Overall, the Oaxaca data suggest to me that Formative period cities were dynamic sites of social experimentation and innovation, but in relatively few cases were social problems, conflicts, and contradictions overcome in ways that allowed for a degree of cohesion and durability.

ACKNOWLEDGMENTS

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CHAPTER THREE

EARLY URBANIZATION IN THE FORMATIVE GULF LOWLANDS, MEXICO

Christopher A. Pool and Michael L. Loughlin

IN DESCRIBING THE ORGANIZATION OF ANCIENT URBAN CENTERS, archaeologists (ourselves included) are generally constrained by the limitations of survey to focusing on the latest or most expansive physical form taken by the city before its abandonment. Nevertheless, we must realize that, with a few short-lived exceptions, cities are palimpsests created over generations through occupations that overlay and modify, but incompletely obscure, the traces of past forms (e.g., Ashmore and Sabloff 2002). This is because urbanization, as a spatial and historical process, responds to perceived needs and aspirations of the historical moment as well as the physical and remembered imprint of the past. In this chapter we apply this perspective to Formative (1450 BCE–300 CE) urban centers in the southern Gulf Lowlands of Mexico, drawing particularly on our research in and around the site of Tres Zapotes, Veracruz (for location of sites see Chapter 1, Fig. 1.1).

Mesoamerican archaeologists have long been preoccupied with defining “urban,” “urbanism,” and “the city,” and assessing when and where “true urbanism” developed. Particular concerns have included whether lowland centers of the Maya and other cultures could be treated as cities and whether urban centers arose anywhere in the Formative period. Such debates have often centered on demographic definitions of urban centers, such as William Sanders and Barbara Price’s (1968) oft-cited minimum threshold of 5,000 inhabitants at a density not less than 2,000/km². Beginning in the 1970s, an increasing emphasis on the functions of urban centers within settlement

systems (e.g., Blanton 1976; M. E. Smith 2010a), together with the accumulation of empirical data documenting extensive and populous, if not densely occupied, lowland Maya centers, resolved the issue of the existence of lowland cities for most archaeologists and refocused attention on variation within more expansively defined categories of “city” and “urban center” (e.g., Sanders and Webster 1988). Nevertheless, debate over the urban character of Middle and Early Formative centers such as San Lorenzo and La Venta continues in some quarters (compare, e.g., Clark 2007; Flannery and Marcus 2000).

Despite a greater tolerance for more inclusive and constructively fuzzy definitions, identifying the object of analysis remains a concern, particularly for comparative research (e.g., Cowgill 2004). Many continue to find Louis Wirth’s (1938: 8) criteria of large population size, high population density, and greater social differentiation relative to other settlements in a region to be a useful point of departure, but treat these as attributes in a polythetic definition of the city rather than requirements in a monothetic typology. Monica L. Smith (2006), for example, proposes a triaxial approach that adds the provision of specialized functions to Wirth’s social differentiation and combines his size and density into a single “demographic” category, which requires a city to exhibit two of the three resulting components. In another polythetic approach to urban analysis, Michael E. Smith (2016) offers an expanded list of twenty-one archaeologically identifiable attributes pertaining to categories of “settlement size” (which includes population, area, and density), “social impact” (urban functions), “built environment,” and “social and economic features.”

Scott Hutson’s (2016) recent analysis of Maya urbanism likewise employs a polythetic definition of “city” that follows M. L. Smith’s (2006) triaxial approach, but treats population size and density separately and requires that a city have three of the four attributes of large size, high density, social differentiation (or “multiplicity”), and specialized functions. In contemplating the sociological studies of urbanism by Wirth (1938) and Georg Sjöberg (1960), which underscore the condition of socially distant people being thrust into contact with one another by high population density, Hutson (2016: 16–17) draws a distinction between urban centers and cities; whereas all urban centers are cities under his polythetic definition, not all cities have sufficient population density or social differentiation to make them urban. Thus, for Hutson, “low density urbanism” is an oxymoron, but low-density (and therefore non-urban) cities may exist.

In this chapter we coincide with recent trends in adopting a polythetic definition that incorporates a functional criterion for cities as nodes within a regional settlement hierarchy in which a combination of administrative, commercial, religious, and/or more broadly ideological activities and services are concentrated (Blanton 2012: 713; Jennings 2016: 9; M. E. Smith 2007: 4). We expect that cities will be larger and more socially differentiated than other

settlements in a region, but recognize that cities are not necessarily more densely settled than towns or villages in the same settlement system (Drennan 1988). Thus, in accord with much contemporary writing on Mesoamerican urbanism, we see differences in population density and layouts of highland and lowland centers as examples of variation in urban form (Cowgill 2004; Stark 2003), rather than typological criteria. That variation is incompletely captured by Richard Fox's (1977) regal-ritual, administrative, and mercantile classification applied to Mesoamerican cities by Sanders and Webster (1988) (see Blanton 2012: 709–713 for a recent discussion).

More to the point, our focus in this chapter is on urbanization, that is, the set of processes by which cities form, which include the nucleation of population, the expansion and hierarchization of regional networks, and the centralization of administrative, economic, and religious functions as nodes within those networks (Pool 2012: 181). This sense of urbanization differs from Hutson's (2016: 17), which refers to the changes that enable people to cope with life in large, dense, socially differentiated settlements. Both are valid definitions of "urbanization," but in Hutson's usage urbanization springs from urban conditions, whereas in ours urbanization consists of the historical processes and social practices that create the cities where those conditions may emerge (see also Cowgill 2004). Therefore, our use of "urbanization" in this chapter is closer to Justin Jennings's (2016: 11) "group of processes that draw large groups of people into new kinds of relationships out of which emerge the roles, responsibilities, and institutions that create a city and countryside." Jennings's (2016: 82) larger point, with which we also concur, is that it takes time to build a city both physically and socially. The low resolution of our archaeological lens often masks the messy processes of urbanization, particularly when growth is rapid, but no city was truly built in a day.

The processes of urbanization were well underway before the close of the Middle Formative period (ca. 400 BCE) in the southern Gulf Lowlands as well as in many other parts of lowland Mesoamerica (e.g., Canuto and Estrada-Belli, Chapter 4; Clark 2007; González Lauck 1996; Joyce, Chapter 2; Love 1999a; Love and Rosenswig, Chapter 7; Ringle 1999; Stanton 2012: 271; Stanton and Collins, Chapter 5; Symonds et al. 2002). For the cases we examine in the southern and central Gulf Lowlands, variation in the form and distribution of civic-ceremonial architecture and residential occupation suggests distinct trajectories of urbanization. Here it is informative to consider the degree to which variant urban configurations resulted from top-down processes imposed by emerging civic authorities or through bottom-up processes originating in neighborhoods or larger social groupings (M. E. Smith 2010a) or perhaps both (Hutson 2016: 8; also see Joyce, Chapter 2). The top-down/bottom-up dichotomy, however, does not quite capture the processes we infer for the Gulf Lowlands, where we argue that politically strategic

negotiations among factions and emergent classes played a role in determining urban form, as did the reconciliation of differing politico-economic traditions with contemporaneous realities. Furthermore, we contend that the making of urban places involves more than just the concentration and segregation of population and the construction of impressive architecture. In Mesoamerica, as in other regions of the world, urban spaces were imbued with meaning through the setting of stone monuments in civic and ceremonial spaces where they materialized unifying beliefs and legitimated political authority (e.g., Guernsey 2006; Guernsey et al. 2010; Guernsey and Strauss, [Chapter 9](#)).

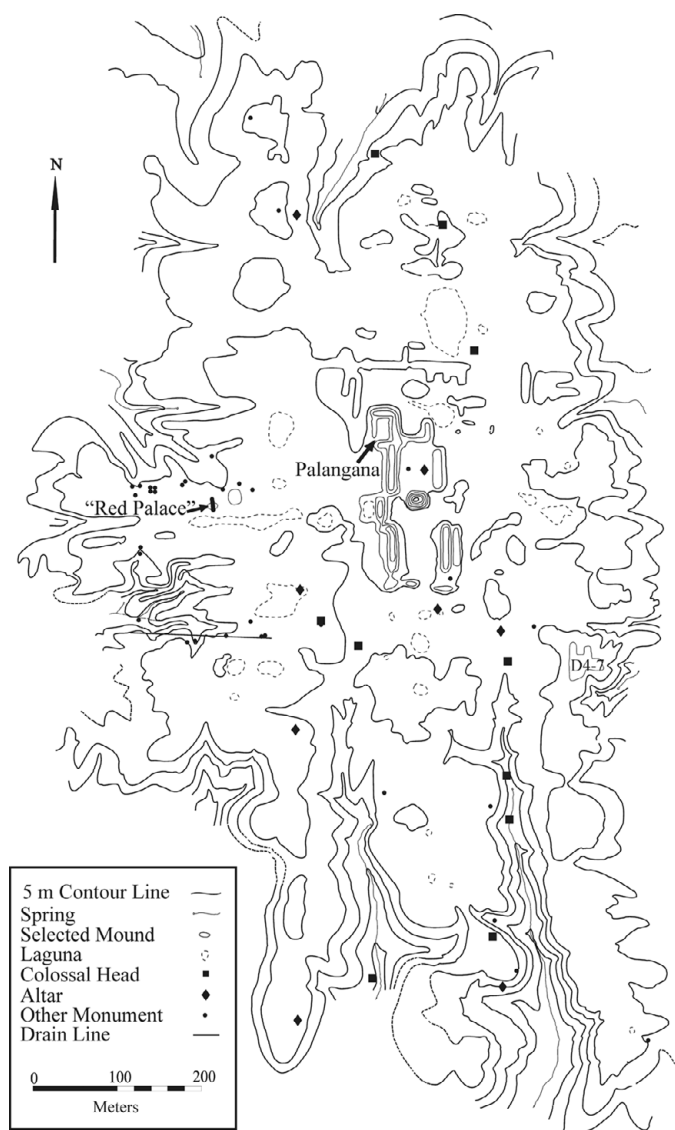
EARLY URBANIZATION IN THE SOUTHERN GULF LOWLANDS

In the Early (1450–1000 BCE) and Middle (1000–400 BCE) Formative periods, processes of urbanization in the Gulf Lowlands are most evident at the Olmec centers of San Lorenzo, Laguna de los Cerros, La Venta, and Tres Zapotes. The Formative period layout of Laguna de los Cerros is not well understood, and we discuss Tres Zapotes below. In this section we focus on San Lorenzo and La Venta.

San Lorenzo

Between ca. 1450 and 1000 BCE, the site of San Lorenzo occupied the apex of a regional settlement hierarchy with at least three, and possibly four, tiers of settlement in the alluvial valley of the Coatzacoalcos River (Clark 2007; Cyphers 1996; Pool 2007: 125–127; Symonds et al. 2002). The earliest documented occupation on the plateau, in the Ojochi and Bajío phases (ca. 1750–1450 BCE), was a village of some 20 ha with an estimated population of between 80 and 180, representing about 18 percent of the regional population (Symonds et al. 2002: fig. 4.4). Before its decline the site sprawled over as much as 775 ha, as determined through extensive auger testing (cf. Cyphers 1996; Symonds et al. 2002: 66), with a population recently estimated at 7,920–12,907 (median 10,4914) (Arieta Baizabal and Cyphers 2017: table 4) (cf. Cyphers et al. 2007–2008: 136; Symonds et al. 2002: fig. 4.4), or about 53.9 percent of the regional population.¹

¹ Symonds et al. (2002: fig. 4.4) estimated a population at San Lorenzo of 3,500–7,500 with a median of 5,500, which they calculated as 40 percent of a median regional population of 13,644. The most recent revised median estimate of 10,414 implies an increase in the site and regional populations of 4,914, with the latter being 18,558. Dividing the population of San Lorenzo by that of the region yields a figure of 53.9 percent for San Lorenzo's portion of the regional population. Burial and erosion of hinterland sites would reduce the percentage of population in the regional center by an unknown amount.



3.1. Map of central San Lorenzo (after Coe and Diehl 1980)

The overall organization of the site is concentric, with ceremonial and administrative functions concentrated in a zone that occupied about 50 ha on the summit of a natural plateau rising from the floodplain of the Coatzacoalcos River (Fig. 3.1) (Coe and Diehl 1980). The civic-ceremonial zone contained elite residences while the bulk of residential occupation was distributed on the artificially terraced slopes of the plateau (Cyphers 1996). Early Formative San Lorenzo lacked prominent mounds like those at the later Olmec center of La Venta, but Ann Cyphers et al. (2007–2008) describe the modified plateau as the largest architectural construction known for the Early

Formative period in Mesoamerica, based on the estimated six to eight million cubic meters of fill revealed by systematic auger testing on the summit and terraces of the plateau. Steep ravines interrupted the slopes, separating terraces that would likely have formed the basis for neighborhoods.

Scores of stone monuments emphasizing themes of rulership and cosmology were arranged in the civic-ceremonial zone, including ten colossal heads arranged in a large-scale display that stretched from one end of the plateau's summit to the other (Cyphers 1999). Most commonly interpreted as portraits of rulers, some of the colossal heads retain traces showing they were recarved from massive table-top altar-thrones (Porter 1990). It is therefore most likely that the heads were placed in their final arrangement late during the Early Formative florescence of the site (Cyphers 2016: 93).

Economic activities in San Lorenzo included the reworking of stone monuments adjacent to an elite residence, suggesting elite control over imported basalt used for groundstone implements (Cyphers 1996). Caches containing several tons of small, multiperforate cubes of imported ilmenite are more enigmatic in their functions, but may also have been employed in specialized production activities (e.g., Di Castro Stringher 1997). Both percussion flaking of obsidian artifacts and consumption of imported obsidian blades appear to have been widely distributed across the site (Hirth et al. 2013).

During its apogee, San Lorenzo participated in a widespread interaction sphere, the Early Horizon, that connected it with settlements from Western Mexico to El Salvador (Pool 2007). Some of that interaction involved the movement of goods across long distances, with San Lorenzo and other middle Coatzacoalcos River valley sites receiving obsidian from sources in southern Guatemala and Central Mexico (Hirth et al. 2013), iron ores (ilmenite and magnetite) from Chiapas and Oaxaca, and modest amounts of greenstone from Guatemala (Jaime Riverón 2003), though some serpentine may have come from Mexican sources in Puebla and Guerrero as well. Conversely, neutron activation analysis (NAA) has demonstrated the exchange of pottery made in the middle Coatzacoalcos River valley to sites in Central Mexico, Oaxaca, and Chiapas (Blomster et al. 2005). Beyond the exchange of objects, ceramic technology and iconography were shared widely by participants in the Early Horizon interaction sphere. In one case, at the Pacific Coast site of Cantón Corralito, technical similarities in locally made pottery, figurines, and other ceramic objects are so similar to those at San Lorenzo as to make a strong case for the existence of a Gulf Olmec enclave in southeastern Chiapas (Cheetham 2006).

There can be no doubt that San Lorenzo performed ritual and political administration for the middle Coatzacoalcos River valley. The lowest estimates for the population at San Lorenzo place it at the lower end of the range for settlements described as cities; more recent estimates, based on intensive auger

testing that has increased the area and density of settlement, place it more comfortably in that range. Because nothing comparable existed in the Gulf Lowlands previously, the appearance of such a large settlement so early makes San Lorenzo's establishment seem rapid. Difficulties in separating the Chicharras phase (ca. 1450–1400 BCE) from the succeeding San Lorenzo phase (ca. 1400–1000 BCE), however, make it hard to say how rapidly population growth proceeded. It seems likely that it took from the beginning of the Chicharras phase to at least the end of the San Lorenzo A phase (ca. 1200 BCE), a span of some ten generations, for San Lorenzo to achieve its maximum population of perhaps 10,000; the development of the regional settlement hierarchy would likely have been similarly multigenerational. Social differentiation appears to have been mainly in the form of ranked statuses and political authority; beyond skilled stone carvers and producers of prismatic obsidian blades (Cyphers and Hirth 2016: 105–117), there is little evidence of horizontal occupational specialization and nothing to indicate that San Lorenzo itself supported a multi-ethnic population as later Mesoamerican cities often did, despite its prominent role in the Early Horizon interaction sphere.

La Venta

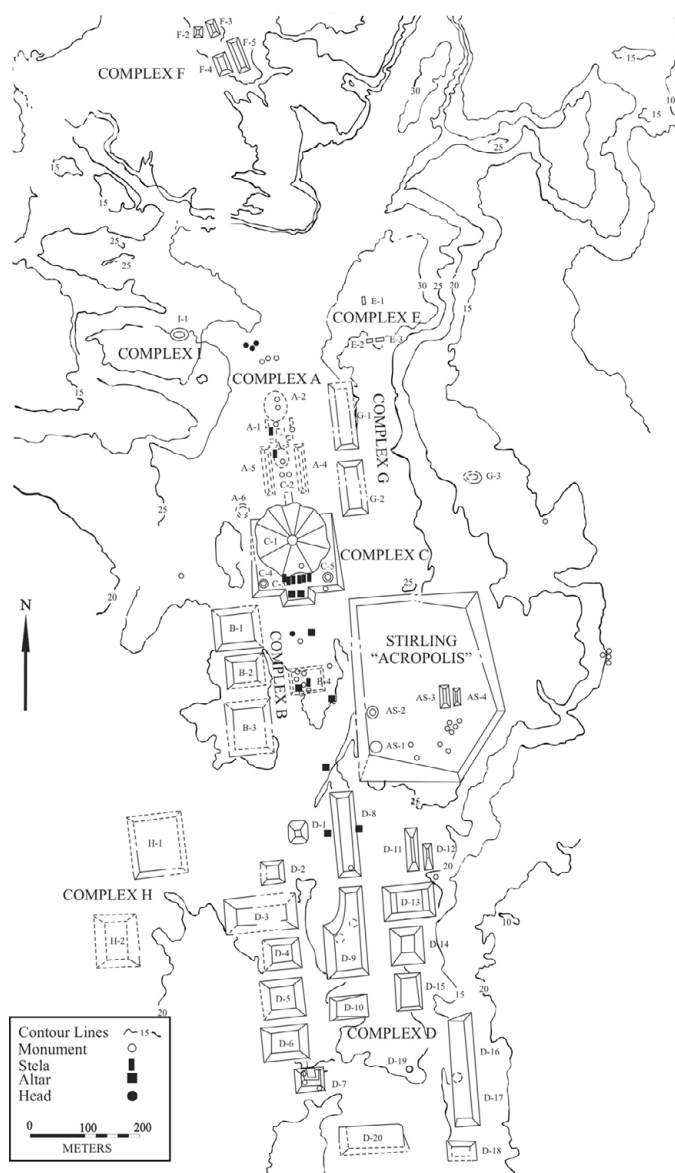
Like San Lorenzo, the site of La Venta, Tabasco, sits on elevated land (in this case, a salt dome) surrounded by a seasonally inundated floodplain and swamp. Sediment cores from the site of San Andrés, about 7 km northeast of La Venta, document the northward expansion of a prograding delta from the Late Archaic through Early Formative periods (Pope et al. 2001). Initial settlement appears to have focused on estuarine settings, occasionally occupying coastal and riverine zones (Rust 2008: 3). Levees were increasingly occupied by homesteads and hamlets during the Late Barí phase (1450–1150 BCE) (Rust 2008: 1435–1436). Occupation from this time occurred at La Venta, but was very sparse (Rust 2008: 1436–1437). The distribution of late Early Formative settlement (Early La Venta I subphase, 1150–1000 BCE) is poorly understood due to disturbance from Middle Formative mound construction and modern development (González Lauck 1996; Rust 2008), but sparse in-situ deposits, ceramics recovered from the fill of later mounds, and similarities of some La Venta monuments to examples at San Lorenzo suggest a growing local prominence for La Venta as riverine settlement continued to expand (Grove 1981a: 66–67; Pool 2007: 128; Rust 2008: 3).

La Venta experienced its apogee in the Middle Formative period (1000–400 BCE) as the head of a three-tiered settlement hierarchy, with secondary mound centers and non-administrative villages and hamlets occupying the scarce land above flood level on surrounding river levees (Rust 2008). Like San Lorenzo before it, La Venta was heavily involved in long-distance trade, bringing in

obsidian from sources in Guatemala and Central Mexico and iron ore from Chiapas and Oaxaca. The amount of greenstone imported to La Venta was particularly impressive, with jade from Guatemala made into exquisite figurines and ornaments, and thousands of tons of serpentine from sources in Guerrero, Puebla, and Guatemala interred in massive offerings in a restricted ceremonial zone, Complex A (Drucker et al. 1959; González Lauck 1996; Jaime-Riverón 2003). Exports from La Venta's region have not been identified elsewhere, but stelae and rock carvings with strong iconographic and stylistic similarities to La Venta's monuments have been found in a zone stretching across Central Mexico to Guerrero and another extending through Chiapas into southern Guatemala and El Salvador – that is to say, along probable routes for the import of greenstone and obsidian (Coe 1968; Clark and Pye 2000; Grove 1993).

Modern development obscures much of the residential occupation associated with the center, but from what can be gleaned, the site appears to have had a broadly concentric organization with civic and ceremonial functions concentrated in a central zone, surrounded by residential occupation, which in turn was constrained by the surrounding swamp, establishing a maximum site extent of 200–400 ha. A remarkable feature of La Venta's civic-ceremonial zone was its division into districts marked by different architectural forms, configurations of ceremonial space, and thematic content of monuments (Fig. 3.2) (González Lauck 1996, 2010; Grove 1999). Proceeding from north to south these were: Complex A, a restricted ceremonial precinct; Complex C, consisting of the Great Mound C-1 and its monumental platform; Complex B, consisting of a large public plaza bounded to the north by Mound C-1, to the east by a possible elite residential complex (the Stirling Acropolis), to the west by three low platforms (Mounds B-1, B-2, and B-3), and to the south by a circular structure opposite a long platform that John Clark (2004; Clark and Hansen 2001) interprets as an early version of the Maya ceremonial E Group (Mounds D-1 and D-8); and Complex D, an area of aligned rectangular platforms that Rebecca González Lauck (1996) suggests may have had largely administrative functions.

David Grove (1999) argues convincingly that the final settings of monuments were intended to reinforce different meanings and practices associated with these sectors. Three colossal heads to the north of Complex A and one to the south of Mound C-1 set off a restricted northern sector containing royal tombs as well as buried offerings of serpentine, jade, and other materials associated with cosmological precepts and royal ancestry. Stelae and altarthrones with carved reliefs combining religious and monarchical themes are concentrated in more public venues in and around Complex B and the north end of Complex D. Near the south end of Complex D, on Mound D-7, a set of three massive sandstone sculptures of squatting individuals holding their outsized heads mirror the colossal heads at the northern end of the civic-ceremonial zone (González Lauck 2010: fig. 6.3). While the final



3.2. Map of central La Venta (Pool 2007: fig. 5.5, redrawn after González Lauck [1996: fig. 1])

association of monuments and architecture was probably operational near the end of La Venta's florescence (1000–400 BCE), Susan Gillespie's (2010; Gillespie and Volk 2014) analysis of construction sequences in Complex A reminds us that La Venta was built over several centuries, and that the appearance of the site varied over time in ways that are far more complicated than are captured in archaeologists' plans or artists' reconstructions. It seems likely that stone monuments were rearranged over time to emphasize meaningful associations of spaces with civic and religious precepts as construction proceeded in different segments of the civic-ceremonial zone.

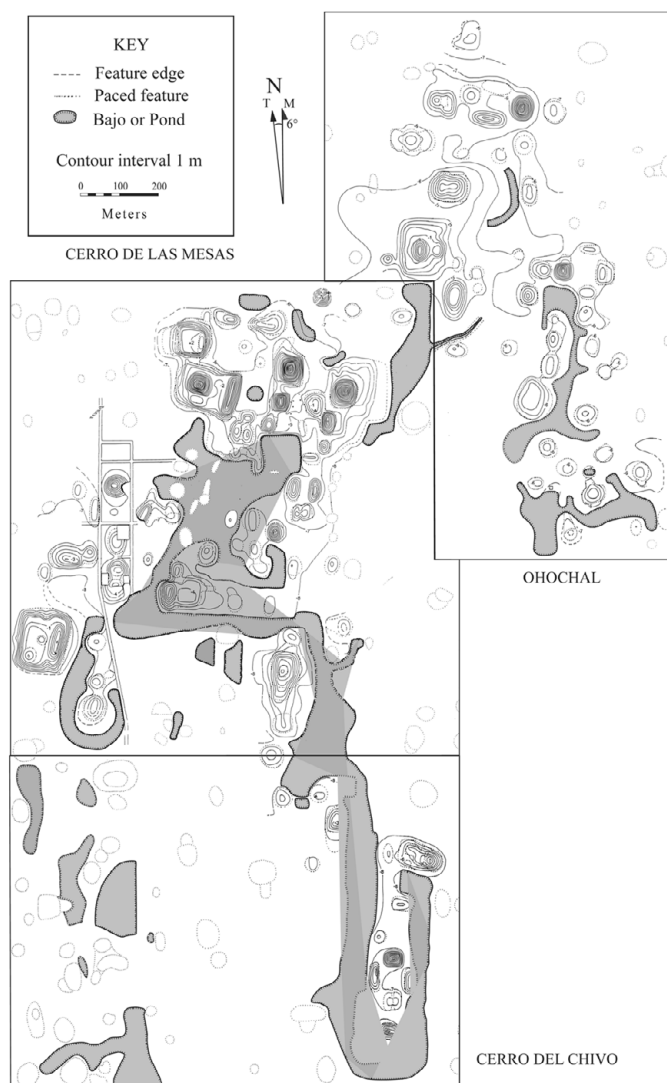
Although excavations in Complexes F and G have shown that La Venta held a resident population beyond the ceremonial core, it is difficult to estimate the size and density of the population due to modern disturbance and a lack of survey data in relatively undisturbed areas. William Rust's (2008: 126) peak estimate of "probably as high as 10,000" between La Venta and San Miguel, 40 km to the east, is not very helpful for the core population of La Venta. With an estimated total residential area somewhere between 130 and 330 ha (subtracting the approximately 70 ha of the central ceremonial zone), and considering the similarity of the setting to San Lorenzo in terms of lack of occupiable land, we might apply Stacey Symonds et al.'s (2002: fig. 3.2) estimated density of 7–15 people per ha, yielding a range of 910 to 4,950 inhabitants. This places La Venta at what many would consider an unacceptably low figure for an urban center in terms of population size and density, although at its apogee it certainly was much larger than contemporaneous settlements in its hinterland. A stronger claim for the urbanization of La Venta and its network of supporting settlements can be made on the obvious social differentiation and specialized ritual and political functions embodied in its monumental works (González Lauck 1996).

MAKING LATER URBAN PLACES IN THE SOUTHERN AND CENTRAL GULF LOWLANDS

In this section we contrast urbanization at Tres Zapotes, which emerged as a regional Olmec center in the Middle Formative period and expanded three- to fivefold in the Late Formative period, with Cerro de las Mesas, which does not appear to have had as large a Middle Formative occupation, but which appears to have dominated the Mixtequilla region in the Late Formative and Early Classic periods. Both centers can be considered "garden cities" in the sense that term has been used in the Maya Lowlands – that is, that relatively low densities of residential occupation (with a possible exception in part of Tres Zapotes) allowed for widespread cultivation of household gardens (Stark 2003; Stark and Ossa 2007). Cerro de las Mesas has the added distinction of incorporating seasonally inundated ponds into its urban plan. The two centers also share the practice of constructing earthen mounds typical of the southern and south-central Gulf Lowlands, which excavations by Annick Daneels (2008) at La Joya and González Lauck (1997) at La Venta have shown could take the form of stepped pyramids.

Cerro de las Mesas

Cerro de las Mesas is a large center in the Mixtequilla, a broad, low ridge between tributaries of the Río Blanco on the western side of the lower Papaloapan Basin. Barbara Stark's (1991, 1999) survey of a 40 km² block containing Cerro de las Mesas found a dispersed but nearly continuous distribution of residential occupation with formal architectural complexes scattered



3.3. Map of greater Cerro de las Mesas (after Stark 1999: figs. 4, 6, and 8, and 2008: fig. 4)

at distances of 1.13 km or less from their nearest neighbor. This prompted Stark (1999: 201) to suggest that the area around Cerro de las Mesas may have constituted a persistent “capital zone,” “an extensive area with dispersed formal groups that, together, constituted an administrative and service core.”

Formal architecture is concentrated in Cerro de las Mesas and two adjoining areas, Ojochal and Cerro del Chivo, which together constitute “greater Cerro de las Mesas” and cover 1.46 km² – the largest for any complex in the region (Fig. 3.3). Sparse occupation has been documented in the area of greater Cerro de las Mesas for the Middle Preclassic period (900–600 BCE in Stark’s chronology), and expanded in the Late Preclassic (600–100 BCE) and Terminal Preclassic (100 BCE–CE 300). Stark (2008: 90) suggests that Cerro de las Mesas grew

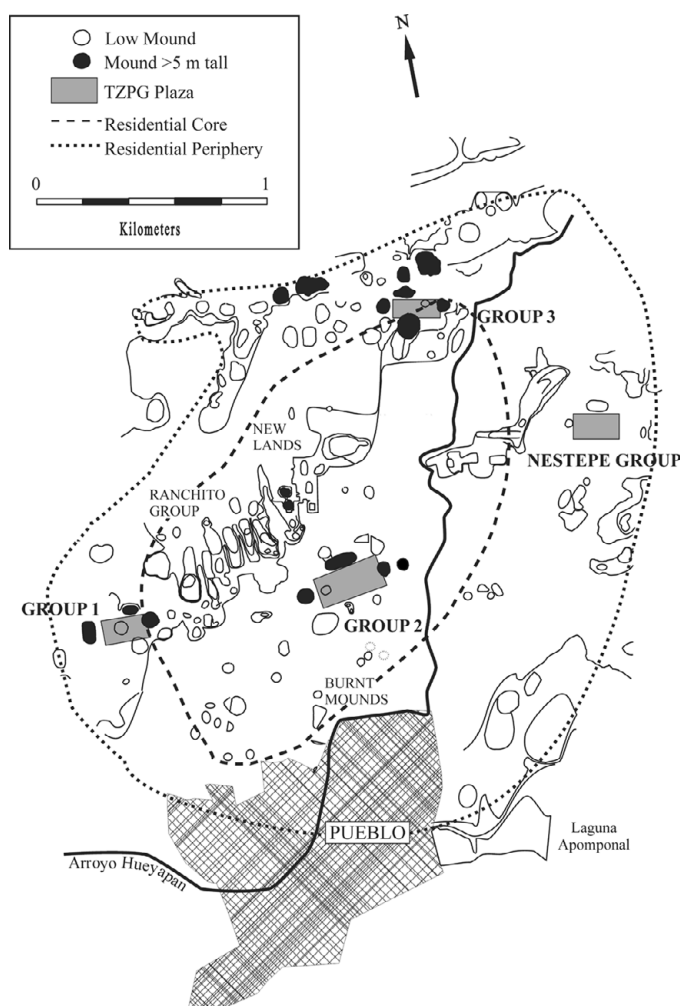
considerably larger than its peers in the Terminal Preclassic, during which time it also saw early mound construction and possibly the carving of some of its earliest monuments, which exhibit Olmec-derived features. Greater Cerro de las Mesas continued to dominate the Mixtequilla in the Early Classic period, when it saw the bulk of its monumental construction and the setting (and likely re-setting) of carved stelae and other stone monuments.

In addition to its incorporation of low, seasonally flooded ponds, the urban plan of greater Cerro de las Mesas is notable for having many more large mounds than other centers in the region and for lacking a single dominant plaza, unlike later major centers (Stark 2003: 397). The north part of central Cerro de las Mesas has four large mounds linked by modest plazas, with stone sculpture concentrated in one “monument plaza.” This appears to represent an early spatial order, reproduced in part at the site of Palmas Cuatas (Stark 2003: 397).

Later inhabitants expanded these mounds and added additional ones in this complex, but retained its basic plan, whereas in other parts of the site they created new complexes with different spatial orders. One of these orders was the “Standard Plan,” initiated in the Terminal Preclassic to Early Classic period, which with modifications occurs widely at Classic-period sites in south-central Veracruz (Daneels 2002, 2008; Stark 2003, 2008). In the Standard Plan, a long plaza flanked by two elongate mounds extends from a tall conical mound and is enclosed at the opposite end by a ball court or other structures. A variant with one flanking mound, which Stark (2008: 99–100) describes as “truncated,” appears to be later in south-central Veracruz, but as we will describe below is earlier in the region around Tres Zapotes, where we consider it the basic plan rather than incomplete. Stark (2003: 411–415) argues that multiple Standard Plan complexes within greater Cerro de las Mesas and in outlying sites in the region represent “settlement segments” that constituted relatively stable subdivisions of the community. She further suggests that the paired elongate mounds served a (perhaps dually organized) corporate function similar to Maya “council houses,” and notes they may signal important competing social factions. In M. E. Smith’s (2010a) terms they would be considered the foci of districts, though the degree to which they served administrative functions is uncertain. Stark’s characterization of the Standard Plan complexes emphasizes a role in fostering solidarity within social districts in counterpoint to the centralized administration of Cerro de las Mesas.

Tres Zapotes

We turn now to the focus of our research on the opposite side of the Papaloapan River basin from Cerro de las Mesas, where both similarities and contrasts to Cerro de las Mesas are present. The site of Tres Zapotes sprawls across the floodplain and terraces of the Arroyo Hueyapan at the interface between the piedmont of the Tuxtla mountains and the coastal plain. Habitable land was not restricted as at San Lorenzo or La Venta, but Tres



3.4 Map of Tres Zapotes, showing Tres Zapotes Plaza Groups (TZPG) and concentric organization of residential occupation

Zapotes' location where the valley crosses the interface of environmental zones gave it a locational advantage with respect to the diversity of upland, lowland, and aquatic resources as well as transport routes that would have made it attractive to a growing population (Pool and Loughlin 2016). Occupation at Tres Zapotes was initiated much earlier than at Cerro de Las Mesas with the establishment of a medium-sized village in the Early Formative period. Surface collections, auger tests, and excavations suggest that occupation extended over some 17 ha in the center of the site in and around the area that would become Group 2, while excavated mound fill (Weiant 1943) and occasional surface finds suggest pockets of Early Formative occupation around the northern Group 3 area and elsewhere (Fig. 3.4).

Over the course of the Middle Formative Tres Zapotes phase (1000–400 BCE), Tres Zapotes grew into an Olmec regional center marked by civic-ceremonial constructions, stone monuments, and extensive occupation. Archaeological surveys to the east on Cerro el Vigía (Kruszczynski 2001) and to the north around Ángel R. Cabada (Loughlin 2012), as well as preliminary data from our just-concluded regional survey, indicate population growth in the surrounding countryside but at a slower rate than within Tres Zapotes (Pool and Loughlin 2016: 291–293).

Our understanding of the spatial organization of Middle Formative Tres Zapotes is limited by later occupation and alluvial deposition, but surface collections and systematic auger tests indicate 73 ha of continuous (though not dense) residential occupation and another 70 ha of residential occupation in adjacent pockets distributed through 148 ha on the fringes of the center. These outlying pockets may be interpreted as the nuclei of neighborhoods, although further subsurface testing would be necessary to evaluate their discreteness from one another and the residential core of the site.

The density of diagnostic rim sherds in surface collections in the core and peripheral zones offers an admittedly imperfect proxy for intrasite variation in population density during the Middle Formative period² (Table 3.1, Fig. 3.5). Using the program Surfer 10.7.972 and data from our intensive survey surface collections, we calculate the volume under the surface defined by diagnostic rim counts in standard 3×3 m surface collections in the 73.4 ha core area and the 148.72 peripheral zone (which includes interstitial areas between occupation pockets as well as pockets detected only in auger tests). Dividing the volume by the area provides a mean rim sherd frequency per square meter, which is 3.4 times higher within the core than within the periphery (1.05 vs. 0.31). We bracket our population estimates by taking five persons per

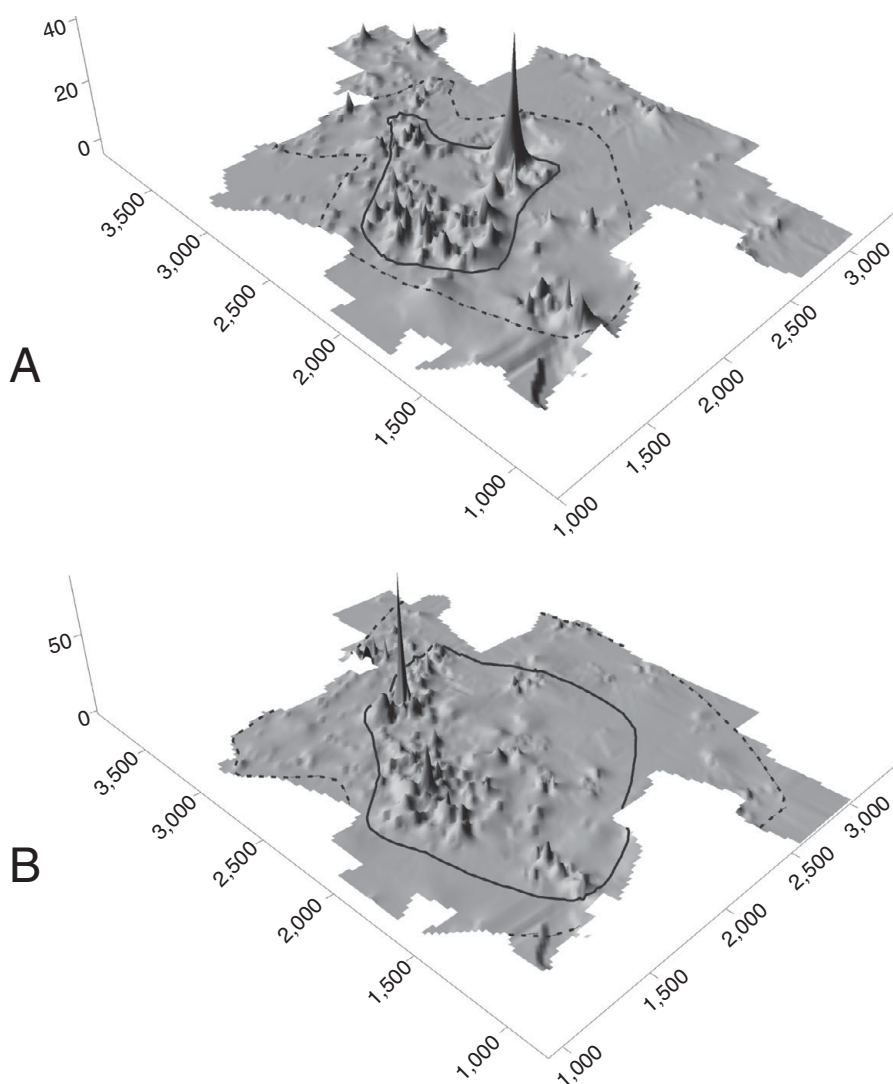
² All population estimates are fraught with uncertainty, and surface artifact densities particularly so. Ceramic density more directly reflects discard intensity, which responds both to population density and consumption rate. As a reviewer pointed out, ceramic densities in centers might be expected to be higher due to higher consumption and discard rates related to feasting. While we make no claim for a high level of accuracy, we are encouraged that ceramic densities at Tres Zapotes are comparable to other measures of population density based on the following points. First, our residential core and periphery are defined on the basis of residential mound densities and subsurface deposits detected in systematic auger tests, in addition to surface collections, and extend over alluvial bottomland and upland terrace in approximately equal proportions. Second, it must be remembered that the Late Formative residential periphery at Tres Zapotes contained three civic-ceremonial complexes (where greater consumption through feasting might be expected) compared to one in the residential core. Third, the highest ceramic densities recorded for each period are outside of areas with documented civic-ceremonial architecture and stone monuments, and so seem more related to domestic occupation and household ceramic production than ceremonial feasting. Finally, our ratios of residential core to residential periphery population densities derived from ceramic densities (3.11–3.39) are remarkably close to the ratio of core and periphery population densities derived from floor areas at San Lorenzo (3.54).

TABLE 3.1. *Middle and Late Formative population estimates for Tres Zapotes based on variables listed*

	Tres Zapotes phase (Middle Formative)	Hueyapan phase (Late Formative)
Core rim volume	771,590.44	2,252,308.03
Periphery rim volume	461,075.49	1,023,326.71
Core area (ha)	73.38	202.00
Periphery area (ha)	148.72	298.00
Core density (rims/m ²)	1.05	1.11
Periphery density (rims/m ²)	0.31	0.36
Core density/Periphery density	3.39	3.11
Periphery pop/ha: low-(mid)-high	5.0-(7.275)-9.55	5-(7.275)-9.55
Core pop/ha: low-(mid)-high	16.96-(24.67)-32.39	15.55-(22.62)-29.70
Core population: low-(mid)-high	1244-(1811)-2377	3141-(4570)-5999
Periphery population: low-(mid)-high	744-(1082)-1420	1490-(2168)-2846
Total Population: low-(mid)-high	1988-(2893)-3797	4631-(6738)-8845

hectare (the lower end of population density estimates in Gulf lowland centers) as a reasonable lower figure for population density in the periphery, and the figure of 9.55 persons per hectare derived for the periphery of San Lorenzo by Arieta Baizabal and Cyphers (2017: table 5) as a maximum density. Multiplying these figures by 3.4, we arrive at estimates of 16.96–32.39 persons per hectare for the core population density (median 24.67). Multiplying these estimates by the areas of the respective zones gives totals of 744–1,420 persons for the periphery and 1,244–2,377 persons for the core, with a total estimated population of 1,988–3,797 (median 2,893) for the height of Middle Formative Tres Zapotes.

A low platform surmounted by a basalt column enclosure in the core of Middle Formative Tres Zapotes recalls the more famous basalt column tomb at La Venta (Drucker 1952). Moreover, associated ceramics, a carved serpentine column, and greenstone celts are consistent with a late Middle Formative period construction of the platform and enclosure. Carved with crosshatching similar to later Maya mat symbols (associated with rulership) as well as a cleft evoking Olmec symbols for earth and maize, and placed vertically through a hole in a basalt slab, the serpentine column and the altar platform are reasonably interpreted as marking the center of the Olmec civic-ceremonial zone as the *axis mundi*. Placement of other Olmec sculptures, in particular two late Middle Formative stelae on the edges of the central precinct and two colossal heads in eastern and western outliers of the Olmec center, suggest a concentric spatial order that emphasized the personal authority of rulers and reinforced the centralization of civic and religious authority in Middle Formative Tres Zapotes (Pool 2010).



3.5. Three-dimensional representations of diagnostic rim sherd frequencies in surface collections at Tres Zapotes: (a) Tres Zapotes phase (Middle Formative); (b) Hueyapan phase (Late Formative). Plots extend to limit of the intensive survey. Solid lines bound the residential core, and dashed lines bound the residential periphery. Both are defined by surface sherd frequencies, subsurface auger tests, and mound distributions

During the Middle Formative period, Tres Zapotes participated in social and economic networks that connected it in varying ways to emerging and established centers in other parts of Mesoamerica. For its obsidian Tres Zapotes looked westward to Mexican sources, primarily in Veracruz and Puebla, in contrast to La Venta, which acquired its obsidian from Guatemalan as well as Mexican sources (Pool et al. 2014). The variation in obsidian sources at Middle Formative sites across the Gulf Lowlands indicates overlapping but autonomous exchange networks, and the distribution of subregional sculptural styles

suggests to us that economic and political ties were not close with La Venta (Pool and Loughlin 2016). Both jade and serpentine arrived in small amounts, the former almost certainly from Guatemala and the latter probably from Puebla (Jaime-Riverón 2016). Ceramic exchange has not been documented, but the potters of Tres Zapotes participated in the technical style of waxy orange-slipped pottery that characterized much of the area from the southern Gulf Lowlands to the Pacific Coast of Chiapas while maintaining a tradition of black and differentially fired black and white to tan pottery from the Early through the Terminal Formative (Lowe 1989; Pool and Loughlin 2016). As Tres Zapotes moved into the Late Formative period, the import of exotic materials aside from obsidian declined and ceramic similarities across the Isthmus of Tehuantepec decreased. Nevertheless, some of the stone reliefs from Tres Zapotes and lesser centers incorporated elements of the iconography and styles found at Izapa and other sites in the Chiapas–Guatemala highlands, piedmont, and Pacific Coast zones; participation in a continuing Olmec-derived monument tradition suggests the maintenance of social and political relations among these regions. It is not clear, however, whether people of the Pacific Coast or other regions beyond the southern Gulf Lowlands were resident at Tres Zapotes.

The inhabitants of the Tres Zapotes polity did not experience a demographic or political collapse like that at La Venta at the close of the Middle Formative period (Pool 2008, 2010; Pool and Ohnersorgen 2003). The capital at Tres Zapotes grew to its maximum extent of 500 ha over the course of the Late Formative Hueyapan phase (400–1 BCE) and its rulers embarked on an intensified program of mound construction. Residential patterning still reflected a concentric organization of denser occupation toward the center in a “residential core” and more dispersed occupation in a “residential periphery” (Pool 2003a, b; Pool and Ohnersorgen 2003), although the edges of Tres Zapotes seem more bounded than those of Cerro de las Mesas. Using the same procedures as described above for the Middle Formative Tres Zapotes phase, we estimate population in the 202 ha residential core at 3,141–5,999 and in the 298 ha residential periphery at 1,490–2,846 for a total of 4,631–8,845 (median 6,738) (Table 3.1). The Cerro el Vigía and RAM surveys indicate that population growth at Tres Zapotes continued to outstrip that in the eastern Lower Papaloapan basin (Kruszczynski 2001; Loughlin 2012; Pool and Loughlin 2016). Much of the population growth in and around Tres Zapotes may well have come in the form of immigrants from the collapsing polity of La Venta. The presence of an immigrant population, although closely related culturally, would have increased the multiplicity of social identities present in the eastern Lower Papaloapan Basin at the same time that factional divisions were appearing within Tres Zapotes.

As Tres Zapotes grew, new spatial orders were introduced in civic-ceremonial zones and in the overall organization of the city (Fig. 3.4). Four formal civic-ceremonial complexes are evenly dispersed at 945–985 m from one another and incorporate a consistent basic plan we have labeled the Tres Zapotes Plaza Group (TZPG) (Pool 2007). That plan consists of a plaza oriented more-or-less east–west, with a tall conical or pyramidal mound at the west end, a long, loaf-shaped mound on the north edge of the plaza, and a low *adoratorio* platform located on the east–west axis of the plaza. Subsequent modifications to three of these complexes added conical mounds to the west end of the plaza and low platforms to the south, but the consistency in orientation as compared to Standard Plans in Cerro de las Mesas is striking. Excavations in these complexes have yielded radiocarbon dates that indicate two to four of the complexes were in use at any one time over the course of the Late and Terminal Formative periods (Pool 2007: table 2; Pool and Ortiz 2008), while earlier excavations within mounds in three complexes recovered Late and Terminal Formative pottery from construction phases (Pool 2000; Weiant 1943). In the surrounding region, our surveys have identified four TZPGs at distances of 6–12 km from Tres Zapotes, suggesting the expansion of the polity and the creation of a more integrated countryside with regularly spaced second order centers (Loughlin 2012; Pool and Loughlin 2016).

Although the four complexes containing TZPGs at Tres Zapotes vary in extent and volume (Pool 2008: table 1; Sullivan 2002: 74–102), Groups 2 and 3 are of comparable size (11.1 and 9.1 ha, and 101,914 m³ and 151,185 m³, respectively), with neither one clearly dominant over the other. Artifact assemblages from refuse deposited behind the long mounds are also similar, without obvious differences in frequencies of wealth or prestige items. We have argued elsewhere (Pool 2008; Loughlin and Pool 2007) that the replication of a basic spatial template, the lack of a single clearly dominant group, and the temporal overlap of these complexes supports a shift toward a more collective political organization with less centralization of authority and greater power sharing among competing factions in the Late Formative period. We have also argued that diversification of formal architectural layouts in the Protoclassic period reflects a weakening of collective rule as leaders of individual factions asserted their individual authority. That diversification included expanded construction in Group 3 resulting in a N-S oriented plaza (Plaza B), and a total construction volume that exceeded that of Group 2.

The impression of a collective (or “corporate” [Blanton et al. 1996]) political organization is reinforced both by the content of Late Formative monuments from Tres Zapotes, which do not emphasize personal rulership, and their distribution, which is less patterned than that of Middle Formative monuments (Pool 2010). It is notable, however, that three of the Tres Zapotes Plaza

Groups incorporate Olmec monuments in a consistent pattern. In Group 1 and the Nestepe Group, a colossal Olmec head was placed on the south side of the plaza, opposite and facing the long mound. In Group 2, the Middle Formative altar platform and basalt column enclosure occupies an identical position relative to the long mound of that group. The colossal heads may well have been reset to conform to this pattern (though we suspect they were not moved far, based on their juxtaposition with other Olmec monuments), but the basalt column altar could only have been incorporated into the plan of Group 2 by building the other mounds in relation to it. Thus, we argue that Late Formative factional leaders intentionally incorporated ancient Olmec monuments symbolizing rulership into the plans of their civic-ceremonial complexes so as to legitimate their political authority.

The distribution of TZPGs at Tres Zapotes suggests a division of city districts along lines proposed by M. E. Smith (2010a; see also Hutson 2016). Each of the TZPGs has surrounding residential occupation, conforming to M. E. Smith's (2010a: 140) definition of a district as "a residential zone that has some kind of administrative or social identity within a city." The presence of the civic-ceremonial architecture would further identify the areas containing the TZPGs as administrative districts. Specific features of the Tres Zapotes urban landscape and the history of its creation, however, prompt reflection on Smith's model for the top-down creation of administrative districts and the dichotomous classification of administrative and social districts.

First, although residential occupation adjoins each of the TZPGs, only Group 3 presents a clear clustering of residential mounds around it, and even this is somewhat misleading because unbounded occupation represented by very high densities of ceramics (10–100 sherds/m² with yet denser pockets) extends the full length of the terrace (Pool and Ohnersorgen 2003: 21, fig. 2.10). Similarly, auger testing in the floodplain revealed extensive occupation between TZPGs on both sides of the Arroyo Hueyapan stream (Wendt 2003). Rather than a cluster of higher density occupation around the TZPGs, surface collections and auger tests reveal a pattern of declining intensity of occupation from the center of the site to the periphery where three of the four plaza groups are located. Walls that might separate districts likewise are not evident, and the escarpment of the terrace cuts across the areas nearest Groups 1–3. The only natural barrier that might separate one district from another is that of the Arroyo Hueyapan, which lies between the Nestepe Group and the other three.

Marcie Venter (2001) analyzed the distribution of motifs in diagnostic ceramics in surface collections at Tres Zapotes. No clear spatial variation was evident until the Protoclassic period, when step-fret motifs clustered in the Ranchito Group and the western end of Group 2, while V-shaped motifs clustered farther north in the area between Group 1, Group 2, and the

Ranchito Group (but including the north side of Group 2 and the southern end of Group 3). While these different distributions may relate to the formation of social districts and their constituent neighborhoods (M. E. Smith 2010a), they do not have an obvious relation to the TZPGs, and they post-date the founding of the TZPGs.

Given the replication of the basic TZPG plan, the even spacing of the centers to the east, north, and west of Group 2, and the fact that the Group 2 TZPG plaza is the largest of the four, it would be reasonable to hypothesize that the TZPG pattern was established in Group 2 and imposed upon the other groups, with each administering a radial district around a zone centered on Group 2. We are concerned, however, that such a top-down model ignores several aspects of the data at hand.

First, it is not clear that construction of the TZPG complex in Group 2 was earlier than that in Group 1 or Group 3, both of which also have evidence of Early and Middle Formative occupation, and, in the case of Group 1, evidence for a Middle Formative construction phase within a Late Formative mound (Pool 2007: 136; Weiant 1943: 6–7). Presence of colossal heads in Group 1 and the Nestepe Group further suggest that the general areas of these complexes were foci of early Middle Formative Olmec ceremony.

Second, although Group 2 is larger than the TZPG (Plaza A) of Group 3 (Table 3.2), it does not approach the volumetric dominance of the civic-ceremonial core of Cerro de las Mesas over surrounding complexes in the Mixtequilla. Therefore, the other TZPGs at Tres Zapotes may have been yet more effective than the standard plans of the Mixtequilla as seats of competing social and political factions. Third, as noted above, there is little indication in the artifact assemblages that the occupants of Group 2 had greater access to highly crafted or difficult-to-acquire materials in the Late Formative than did the occupants of the other plaza groups.

We therefore favor an alternative model more consistent with the dispersed distribution of Late Formative monumental stone sculpture, the lack of

TABLE 3.2. Plaza group areas and mound volumes for Tres Zapotes

	Group Area in ha	Plaza Area in ha	Total Mound Volume in m ³
Nestepe Group	3.9	1.5	14,197
Group 1	7.1	2.0	59,763
Group 2	11.1	4.2	101,914
Group 3	9.1	Plaza A 1.1	Plaza A 46,194.18
		Plaza B 1.5	Plaza B 93,597.46
		Plaza C 1.4	Plaza C 11,393.76
		Total 4.0	Total 151,185.40

Note: Group areas and mound volumes, except Nestepe Group, from Sullivan (2002: 74–102, table 5)

personalized images of Late Formative rulers, and the flattened distribution of wealth and prestige items among the TZPGs. By this model, Group 2 grew to a larger size than other TZPGs because (1) it served integrative ceremonial and administrative functions for the Epi-Olmec capital, and (2) it retained its TZPG spatial order as it grew throughout the Protoclassic and Early Classic periods when Groups 1 and 3 were experimenting with new spatial orders (Pool 2008). The replication of the TZPG layout and the spatial distribution of TZPGs would then result from collective decisions by participating factions that emphasized shared cosmological precepts over competitive display, while the greater volume of construction in the Group 2 TZPG resulted from a longer history of continued expansion, perhaps enhanced by more-or-less voluntary contributions by other factions on behalf of the polity as a whole.

CONCLUDING THOUGHTS

Every city has its own history. In Oaxaca, Monte Albán was founded on neutral ground at the summit of a sacred hill (Blanton et al. 1993; Joyce 2004, Chapter 2; Urcid 2011a). In the Basin of Mexico, Teotihuacan grew through aggregation that depopulated much of the basin (Cowgill 2004; Sanders et al. 1979; Sugiyama, Chapter 8). In the Pacific piedmont of Chiapas, Izapa gradually expanded over centuries from its beginnings as an Early Formative village, reaching its maximum extent by the late Middle Formative period and its greatest power and influence during the Late Formative (Love and Rosenswig, Chapter 7).

The Gulf Lowlands of southern Veracruz and western Tabasco have a long history of urbanization, beginning in the Early Formative period with the growth of population and centralization of civic and ceremonial functions at San Lorenzo, and the expansion and hierarchical differentiation of settlement in the countryside it dominated. Though delayed by two to four centuries, similar processes proceeded along a similar trajectory at La Venta. Both centers emerged from pre-existing villages located on the largest pieces of high land amid seasonally inundated lowlands – circumstances that attracted growing populations and encouraged the siting of developing civic and ceremonial institutions for practical and ideological reasons. It would be a gross overreach to suggest that simple topography shaped the emerging, highly centralized political economy, and we emphatically do not do so. However, we do assert that the combination of restricted habitable land and the centralization of political power and authority in an individual ruler contributed to the concentric form of both centers with their monumental cores surrounded by residential occupation. Urbanization did not proceed evenly throughout the Gulf Lowlands, however, but in fits and starts as Olmec centers rose and fell;

some areas, such as the Tuxtla Mountains and the Mixtequilla, did not see the emergence of regional centers before the Late Formative period.

In the Mixtequilla, the processes of urbanization proceeded slowly until Cerro de las Mesas outstripped its peers after 100 BCE, initiating massive mound construction accompanied by the carving of early stelae depicting rulers whose elaborate costumes drew on ancient Olmec symbols of ruling authority. As at La Venta and San Lorenzo before it, monumental works at first were heavily concentrated at Cerro de las Mesas proper. As the site grew, however, Standard Plan complexes were established as ceremonial foci of districts that may have held competing social factions amid dispersed settlement in an extensive capital zone (Stark 2003). In other words, the continued low-density urbanization of the Mixtequilla landscape appears to respond to negotiation among competing interests in changing political-economic circumstances.

In contrast to the Mixtequilla, the processes of urbanization (nucleation of population, expansion and hierarchization of regional networks, and centralization of functions in higher-order settlements) had already been operating at Tres Zapotes for six centuries by 400 BCE, while the site had grown and concentrated civic and ceremonial functions over the course of the Middle Formative period. As rulers of an Olmec polity, the lords of Tres Zapotes emphasized their exclusive authority, first in colossal head portraits and later in stelae that glorified the person of the ruler (Pool 2010). With the collapse of the La Venta polity in Tabasco (Pool 2007), rapid population growth in the Tres Zapotes region (Loughlin 2012), and an increasingly competitive political landscape, however, the leaders of Tres Zapotes faced the challenge of fashioning community among disparate political and social factions (Pool 2013). The result was a more collective political organization that expressed its unity in its capital city through replication of a common spatial order (the TZPG) in functionally equivalent civic-ceremonial complexes that formed the foci of urban districts. In their district centers, however, elites incorporated ancient Olmec symbols of patrimonial authority that reinforced their own claims to power. Thus, the urban plan of Tres Zapotes, through the form, distribution, and content of its civic-ceremonial complexes, expresses the negotiated resolution of factional interests among contemporary rivals with an inherited legacy of exclusionary rulership.

Archaeologists will continue to debate whether any of the cases we have presented constitute cities or can be described as urban. Though they varied in settlement density and form, each falls toward the lower end of population size and density – with San Lorenzo being the largest of the bunch – and may be included or excluded from the category of “city” or “urban center” based on one’s operational definition. We also acknowledge that our usage of “urbanization” to refer to the antecedent processes that move a society toward

urbanism is not shared by all. We hope, however, that our comparison of these cases illustrates not only the variation in form among large Gulf centers, but also our larger point that urbanization is a spatial and historical process which, at each point in its trajectory, responds to perceived needs and aspirations of the moment as well as the physical and remembered imprint of the past.

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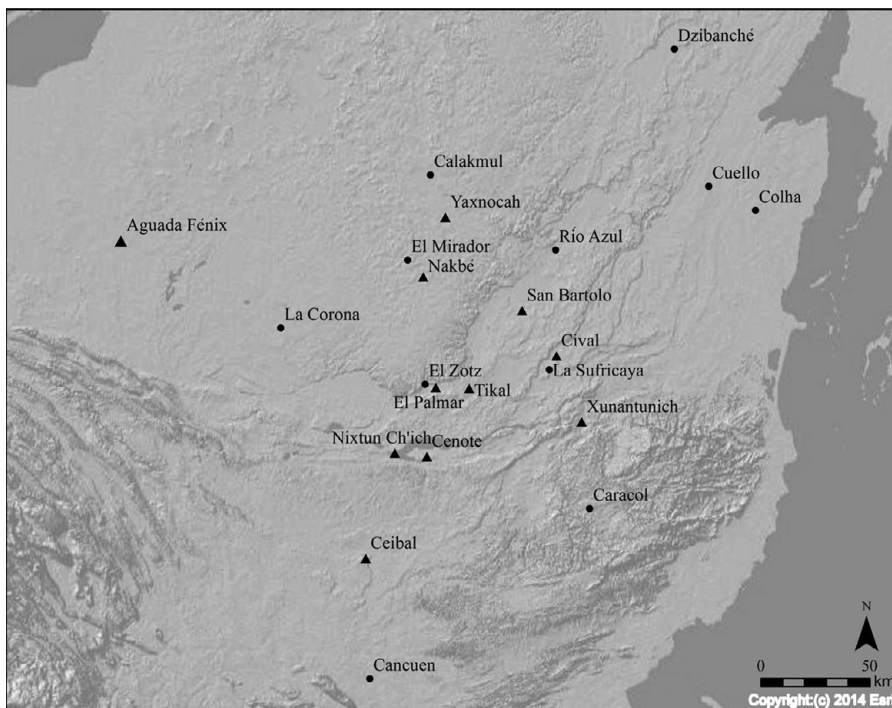
CHAPTER FOUR

PATTERNS OF EARLY URBANISM IN THE SOUTHERN MAYA LOWLANDS

Marcello A. Canuto and Francisco Estrada-Belli

IN THE PAST, THE STUDY OF ANCIENT URBANISM CALLED OUT THE SINGULARITY OF the Maya case in a manner that left Mayanists with an outstanding theoretical debt to the rest of the scholarly field. With seeming dismay, V. Gordon Childe (1950: 9) unabashedly claimed: “[T]he minimum definition of a city, the greatest factor common to the Old World and the New will be substantially reduced and impoverished by the inclusion of the Maya.” His techno-economic argument for early urbanism (and, by extension, ancient sociopolitical complexity) was not supported by the Maya data as he understood them. His subsequent ten characteristics of ancient urbanism and sociopolitical complexity, then, were inescapably impoverished – that is, made less precise and more abstract – by the inclusion of the ancient Maya into the fraternity of ancient urban civilizations.

In this chapter, we examine the development of early Maya urbanism and de-couple it from the process of sociopolitical complexity to which Childe had inexorably, if implicitly, tied it. Here we examine how processes of urbanization in the southern Maya Lowlands (Fig. 4.1), especially those of the early Middle Preclassic period (1000–700 BCE), stand on their own as *sui generis* social innovations that did not necessarily derive from or immediately produce the institutions of hierarchical organization that would eventually guarantee the southern lowland Maya states of the Late Preclassic and Classic periods. Furthermore, we approach this topic of early Maya urbanism from a regional perspective rather than focusing on any one particular site. We are, therefore, necessarily generalist, adopting a normative approach to discuss regional



4.1. Map of early southern Maya Lowland centers (marked by triangles) and other sites mentioned in text. Basemap data by ESRI. Image credit: Francisco Estrada-Belli

patterning with the benefit of much more extensive settlement data and a better understanding of Maya socioeconomic processes than was possible only a few years ago, prior to the advent of aerial lidar surveys in Maya archaeology (Canuto et al. 2018; A. Chase et al. 2011).

URBANIZATION AND THE “POLITICS OF PLACE”

The study of urbanism has matured since Childe’s first formulations, rendering the Maya case somewhat less anomalous. A few decades ago, in fact, Marvin Mikesell, famed University of Chicago geographer, noted: “Once upon a time, we geographers had this ridiculous argument: ‘Was the first city a market, a storehouse, a temple or a fort?’” (Keoun 1999). With respect to the urbanism of the Old World, this ridiculous argument was abandoned as scholars such as Paul Wheatley (1971: 481) recognized the geomantic underpinnings of urban centers in China.

In highland Mesoamerica, scholarship has indeed abandoned simple arguments about the nature of Prehispanic urbanization. Recent discussions (Cowgill 2003a, b; Hirth 2008; M. E. Smith 2007, 2010a; Webster and Sanders 2001) have moved away from the traditional paradigm that explained urbanism and sociopolitical hierarchy primarily as the natural consequences of

technological innovation and economic surplus leading to population concentration (Childe 1950: 8). Instead, new models, perhaps in the tradition of Wheatley (1971), have delved into the role of ideology and religion in the development of ancient cities. Nevertheless, the prevailing notion of prehistoric urbanism in Mesoamerica remained that it resulted largely from the top-down intervention of religious or political elites (Marcus and Sabloff 2008: 21), whether it was motivated by security concerns, economic efficiencies, religious proscriptions, or political legitimation.

Childe's original consternation with the Maya case has been broadly justified by modern recognition of the phenomenon now known as "low-density urbanism," which characterizes many tropical zones throughout the ancient world and in which urban developments do not follow the same patterns of those seen in more arid, highland regions (Fletcher 1995, 2009, 2012; Graham 2005; Isendahl and Smith 2013; M. E. Smith 2010b). In fact, throughout the social sciences, urban theory has long struggled with or entirely overlooked such contexts largely because the abiding premise, despite multiple paradigm shifts, has been that analysis should focus on types of settlement that were defined as qualitatively different from non-urban contexts located "outside" or "beyond" them (Brenner 2014: 15). Such definitions often involved references to settlement size, density, and heterogeneity that had been first proposed by the Chicago School sociologist Louis Wirth (1938).

In this way, scholarship tended toward the "privileging, isolation, and . . . naturalization of the city in studies of urban processes where the non-city may also be significant" (Angelo and Wachsmuth 2015: 20). This particular bias in urban studies renders much of its analysis poorly suited to two particular contexts important to this chapter: (1) low-density settlement regions, and (2) pre-urban periods during which the "non-city" was the norm. We can therefore suggest that the development of urbanism in the southern Maya Lowlands is, in some ways, a phenomenon for which urban studies can provide few analytical tools.

Where urban studies can, however, provide a potential road-map to the interpretation of these spatial and temporal contexts is in the approach highlighted by Henri Lefebvre (1970). His method focused on the processual and dialectical relationship between "agglomerations" and their operational landscapes. Although his analysis focused on modern urbanism as an expression of capitalist modes of organization, distribution, and accumulation, it explained mechanisms and processes of integration over space and time rather than describing urban characteristics (see Harvey 2014). This processual and dialectical roadmap suggests that scholars of low-density settlement must focus on the processes that led to socioeconomic and political integration among an otherwise dispersed population.

This approach also recognizes that the distinct forms of urbanization found in the archaeological record must be understood not as archetypes in an

evolutionary sequence but, rather, as the “mutually interdependent yet intensely conflictual dimensions of an historically constituted, discontinuously evolving totality” (Brenner 2014: 21). This dialectic of process and historical contingency is the study of what Lefebvre (2009) calls the “politics of space,” wherein sociospatial arrangements and patterns not only reflect but also are transformed by practices leading to the rise of economic (in)equalities and political hierarchy.

ALTERNATIVE URBANISMS

Other strains of thought on urbanism move away from proscriptive and coercive models altogether. Scholars have proposed alternative heterarchical mechanisms for the ordering of ancient life into far-flung and complex networks of interactions, which led to populations concentrating and aggregating around one another, which in turn resulted in *de facto* cities without the need for the oversight of a centralized hierarchy (McIntosh and McIntosh 2003; Possehl 1998). Relatedly, bottom-up approaches to urbanism (Aston and Bond 1976; Lynch 1981) draw heavily on theoretical frameworks proposed by Pierre Bourdieu (1977, 1990) and Anthony Giddens (1984), who suggest that sets of structured practices of different constituent groups contributed to the development and maintenance of large aggregated and concentrated settlements. In other words, these approaches see urbanism as ever “becoming” – that is, emergent – and an unintended consequence of structured human interaction.

Modern models of urbanism have also been used to suggest how the built environment can help develop a sense of *communitas* (Turner 1969) through structured practices. These approaches suggest there is a connection between the spatial design of the built environment and a sense of community (Ellis 2002: 277). For instance, neighborhoods provide intensive face-to-face social interaction, serving as the gateways to broader networks of social interaction embedded in the complex urban landscape (Jacobs 1961; Rofé 1995). In other words, new urban studies recognize the potential for horizontal solidarity, achieved through the development of a sense of place and social affinity in an otherwise hierarchically organized urban context characterized by boundaries and controlled movement.

Recent revisions suggest that urbanism should be seen as a process “that draws a large group of people into new kinds of relationships out of which emerge the roles, responsibilities, and institutions that create a city and a countryside” (Jennings 2016: 11). Such a formulation is consistent with the idea that “paths towards large scale social formations” correlate with notable increases in population size (Drennan and Peterson 2012: 88). That is, socio-political complexity results from the aggregation of people in a single place rather than *vice versa*.

In such a formulation, the reasons why people would coalesce in ancient times would be varied and perhaps short-lived (see Bandy 2004; Fletcher 1995). Such a view amplifies the ways in which “multiple and potentially conflicting rationalities of individuals and groups” (Blanton and Fargher 2008: 14) can result in the development of clustered settlements and sociopolitical complexity. Moreover, in those rarer examples where nucleation persisted, the logistical and pragmatic challenges would have necessitated transformational changes from which institutions of complexity arose (Cowgill 2003a: 48; 2004: 534; Pauketat 2007: 163; Shen 2003: 304–305). Such models see urbanization resulting from “the immense challenges that large groups face when they come together” (Jennings 2016: 18).

As settlement nucleation increased, the development of sociopolitical specialization, along with concomitant ideological justifications, would have aimed to address and relieve growing stresses resulting from scalar increases. While Robert Carneiro (1967, 1970) had early on suggested a relationship between settlement scale and the development of institutions of hierarchical inequality, there remains an important fact to consider before committing to a simple stepwise model for urbanization. As Justin Jennings (2016: 275) observed, “in these first cities, greater hierarchization was usually the most odious of the available choices” because early settlements would have been composed of people of more egalitarian *habitus* and therefore immanently inimical to hierarchical solutions (Ames 2010; Angelbeck and Grier 2012; Vaughn et al. 2009; Wiessner 2002, 2009). Archaeological research focused on early urbanization, in fact, suggests that erstwhile mobile people or residents of small villages innovated a variety of responses to settlement nucleation that neither immediately nor necessarily resorts to strategies of hierarchical centralization (Canuto 2016; Hodder and Cessford 2004; Inomata et al. 2015a; Kuijt 2000: 97).

Importantly, the realization that early societies might resist adopting hierarchical innovations in order to maintain their enlarging groups helps explain the relative rarity of states in the ancient world (Jennings 2016: 277). Stated differently, the development of sustainable nucleated settlement, which would have eventually occasioned the development of the institutions of sociopolitical organization necessary for ancient states, was fraught with resistance and segmentary forces (Bandy 2004; Fletcher 1995). Given that all early strategies did not necessarily come to aid some sort of consensual and collective progression toward hierarchical complexity, we should look for, and be able to recognize, multiple pathways to urbanization (Lawrence and Wilkinson 2015).

In terms of the ancient Maya, therefore, we need to appreciate how their first archaeologically visible innovations, designed to facilitate a larger than face-to-face group, might not have been the product of, nor resulted in, institutionalized hierarchy. In order to do this, we take a broad look at the rise of urbanism in the southern lowland Maya area starting in the Middle

Preclassic period (1000–700 BCE) and ending with the first dynastic capitals in the Terminal Preclassic period (100–250 CE). Over this millennium, the southern lowlands became filled with cities where previously only dispersed and mobile populations of horticulturalists and gatherers had lived (Fig. 4.1). These transformations were rapid and radical, permanently modifying the ways in which the lowland Maya interacted with one another. We highlight the major regional patterns of architectural development within this area in order to identify shared processes of “incipient lowland Maya urbanism.”

THE “JUNGLE URBANISM” OF THE LOWLAND MAYA

Considering the maturation of urban studies within archaeology, does the lowland Maya case continue to reduce and impoverish the discourse? Can Mayanists contribute in some way to this discussion that does not dumb-down what would otherwise be a rather sophisticated and exact discussion on the nature of urbanization in the ancient world? To do so we must first attempt to break from the familiar, though exasperating (especially to our fellow Mesoamericanist colleagues), pattern of first extolling the uniqueness of the “Maya case” of urbanism as well as from an overemphasis on the ritual functions of the Maya city (Ciudad Ruiz and Iglesias Ponce de León 2001).

The earliest models of lowland Maya civilization emphasized the religious and ceremonial nature of the lowland Maya city. Based more on supposition than empirical data, J. Eric S. Thompson’s (1954) model of a theocratic lowland Maya society supposed a ritual-fueled urbanism that severely constrained the manner and function of its major centers. Michael Coe’s (1965b) ethnohistoric research of the circuitous boundary marking rites observed during Maya New Year rituals led to the development of a model of urbanization derived from ceremonial procession. Early research left the impression that lowland Maya urbanism was primarily the function of ritual specialists managing and coordinating the labor and devotional energies of a large peasantry towards the construction of empty ceremonial centers. The disproportionate and narrow focus on large lowland Maya centers filled with largely (at the time) undecipherable hieroglyphic texts, filled with calendrical annotations, supported these early top-down models.

Despite modern advances in epigraphy, which have confirmed the more “secular” nature of the topics commemorated in hieroglyphic texts strewn about lowland Maya centers, this approach remains quite strong in modern models of Maya urbanism. Though more nuanced with an appreciation for the impact of historical contingency upon the layout of a Maya center, Wendy Ashmore’s model, following the inner vs. outer city distinction identified by Joyce Marcus (1983), suggested that a Maya city’s core adheres to certain cosmological principles that underwent modifications due to its unique, local

history (Ashmore 1991, 2005; Ashmore and Sabloff 2002). In large part, these understandings were strengthened by recognition of the fact that the lowland Maya often marked and referred to the buildings constituting the inner, or central, core as reproductions of the natural environment (Ashmore 2005; Stuart 1987).

Proper and systematic settlement research in the Maya Lowlands beginning in the 1950s, although hindered by the inaccessibility of much of the region, provided the necessary wrinkles that inevitably complicated these models. From Gordon Willey's (Willey 1956; Willey and Bullard 1965) first surveys in the Belize River valley, to Ashmore's (1981) influential focus on settlement patterns, and Norman Hammond's (1975) first attempts at providing a hierarchy of sites, it became clear that the lowland Maya landscape did not support the simple urban–rural dichotomy that earlier models had suggested. Rather, these and many other studies (Andrews and Andrews 1980; Carr and Hazard 1961; Folan et al. 1983; Puleston 1983) recorded higher-than-expected numbers of residential settlement at sites such as Copán in Honduras, Dzibilchaltun in the Yucatan peninsula of Mexico, and Tikal in the Petén region of Guatemala. These studies led to the appreciation that, embedded within the Maya landscape, were different scales of settlement (de Montmollin 1995; Iannone 2005) with large populations and greater degrees of rural complexity than originally imagined (Canuto 2002; Gonlin 1994; Iannone and Connell 2002a).

With the benefit of a more robust set of data on the extent, variety, patterning, and complexity of the lowland Maya landscape, early studies of Maya urbanism began to question the primacy of the “ceremonial center” (Andrews 1975). Scholars undertook more nuanced approaches that focused either on typological or functional criteria for models. Typological models, like that proposed by William Sanders and David Webster (1988; Webster and Sanders 2001), drew from broader cross-cultural studies (Fox 1977) that characterized Maya urbanism using quantifiable criteria such as site size, population density, and settlement nucleation (as first suggested by urban sociologists such as Wirth 1938). Using this approach, Sanders and Webster (1988) defined the Maya city as a regal-ritual center organized around the residence of a ruler. Of course, highly comparative approaches such as these tended to mask relevant differences (Chase et al. 1990; M. E. Smith 1989).

Functional approaches (Chase and Chase 1996; Chase et al. 1990; Marcus 1983), drawn from Ernest Burgess's (1925) “concentric” model and Homer Hoyt's (1939) “sector” model, saw cities as the nexus of regional interaction, regardless of the actual size or density of their residential population. Diane Chase and colleagues (1990) make use of this approach to show how Caracol was the centrally organized administrative hub of an extended population. Furthermore, this approach also called for a degree of intra-polity ideological,

economic, and political integration such that secondary and tertiary sites would not be scalar miniatures of larger sites but, instead, functionally distinct from their capitals (Chase and Chase 1996: 805; Iannone 2002: 70; Scarborough and Valdez 2003). The problem with this approach, as identified by Kenneth Hirth (2008), is the underlying presumption of the city as a closed hierarchical system defined exclusively by top-down forces of integration. Although useful in the abstract, it does not directly address how settlement is integrated; instead, it assumes the primacy of a managerial centralized authority that bore the entire burden of the city's function and meaning.

These varying approaches, whether typological or functional, highlighted the major pole of scholarly contention regarding lowland Maya urbanism: the extent to which Maya centers were centralized (see Marken 2011). Models advocating top-down "urbanscapes" advocated for complexly integrated and centralized cities. These studies were often buttressed by the extensive and comprehensive settlement work conducted at both Tikal and Caracol, in modern Belize, two large sites where population sizes, settlement densities, residential complexity, extensive earthwork features, and monumental architecture conspired to portray the lowland Maya as urban (Becker 1999; Carr and Hazard 1961; Chase and Chase 1994; Culbert et al. 1990; Ford 1986; Fry 2003; Haviland 1965, 1970, 2003; Orrego Corzo and Larios Villalta 1983; Puleston and Callender 1967; Puleston 1973, 1983; Webster et al. 2004, 2007). An opposing and, for several decades, predominant view claimed that lowland Maya cities never attained the degree of settlement density to be regarded as "true cities." Such studies tended to develop from bottom-up research that emphasized the socioeconomic autonomy of the ancient Maya commoner (Freter 1988, 1994; Sanders and Webster 1988; Webster 2005; Webster and Gonlin 1988; Webster et al. 1992), and therefore claimed Maya centers were "managed mosaics" of settlement and horticultural plots, or garden cities (Chase and Chase 1998; Fedick 1996; Ford and Nigh 2009; Scarborough 1996). Such garden cities were composed mostly of periurban zones wherein the farmer residents managed their own affairs (Webster and Murtha 2015), remaining only loosely tethered to the vicissitudes of the political core.

In part, these latter theories of a loosely integrated lowland Maya society are suggested by the seemingly confounding lack of obvious limits and structure to lowland Maya settlement; that is, lowland Maya urban areas never appear particularly dense and their surrounding populations extend ubiquitously in low-density and undifferentiated patterns (Bullard 1960; Demarest 2006; Folan 1992; Kurjack 1974; Laporte and Mejía 2005; Marcus 1993, 1998; Tourtellot 1988; Willey and Bullard 1965; Willey et al. 1965). These patterns gave rise to the idea that populations surrounding the civic-ceremonial centers were not deeply integrated with any one center or the royal houses that ruled from them.

In recent years, the nature of lowland Maya urbanism has been heavily impacted by the applications of lidar remote sensing technology that have allowed for views of canopy-covered ground surfaces in places such as the Petén, central Belize, and southern Campeche (Canuto et al. 2018; Chase and Chase 2017a; Chase et al. 2014a, b; A. Chase et al. 2011; D. Chase et al. 2011; Ford 2014; Inomata et al. 2017; Prufer et al. 2015; Ruhl et al. 2018; Šprajc 2020a, b; Yaeger et al. 2016). These data, while still quite preliminary, demonstrate higher settlement densities over larger areas than ever imagined. In fact, the traditional pedestrian survey method that provided data most consistent with the current lidar data were those of the Tikal project (Culbert et al. 1990). In those efforts, population sizes of ca. 60,000 people were suggested for Tikal's urban core and surrounding periurban areas. While many disagreed that such population concentrations could ever have been achieved in the Maya Lowlands (Ford 1991; Haviland 1970, 1975, 2003; Puleston 1973, 1983; Sanders and Webster 1988; Webster and Murtha 2015), lidar data from similar urban contexts elsewhere in the lowlands (Canuto et al. 2018; A. Chase et al. 2011) are now suggesting that such estimates could indeed be accurate, if not *still too low*.

While lidar data have not been fully quantified and compared inter-regionally to develop more general models for Classic lowland Maya urbanism (but see Canuto et al. 2018), initial findings suggest that the millennium following the Preclassic period of “incipient lowland Maya urbanism” saw the extension of an urban landscape that would cover much of the southern Maya Lowlands. Although these facts may not fully explain the processes by which the early Middle Preclassic Maya nucleated into the first large settlements of the lowlands, they do suggest that those early processes wrought irreversible changes to lowland Maya society that would only be undone by the phenomenal population decline in the southern lowlands during the ninth and tenth centuries CE.

These regional data, importantly, complement “next-generation” residential and household archaeology in the Maya area that demonstrate how commoner populations engaged in complex and diverse socioeconomic and political interactions with their ruling elites (Ashmore et al. 2004; Canuto 2002, 2004; Canuto and Fash 2004; Freter 2004; Iannone and Connell 2002b; Robin 1999, 2012; Yaeger 2000, 2003a, b; Yaeger and Robin 2004). These studies, through a plethora of research methodologies involving soil chemistry, sourcing, settlement survey, household archaeology, and community studies, demonstrate that center and hinterland interactions were robust and complex. They illustrate that middle-level approaches succeeded in observing phenomena in the blind spots created by the over-extensions of both bottom-up and top-down models. Furthermore, the implication of these studies to the narrower question of lowland Maya urbanism was that the lowland Maya city

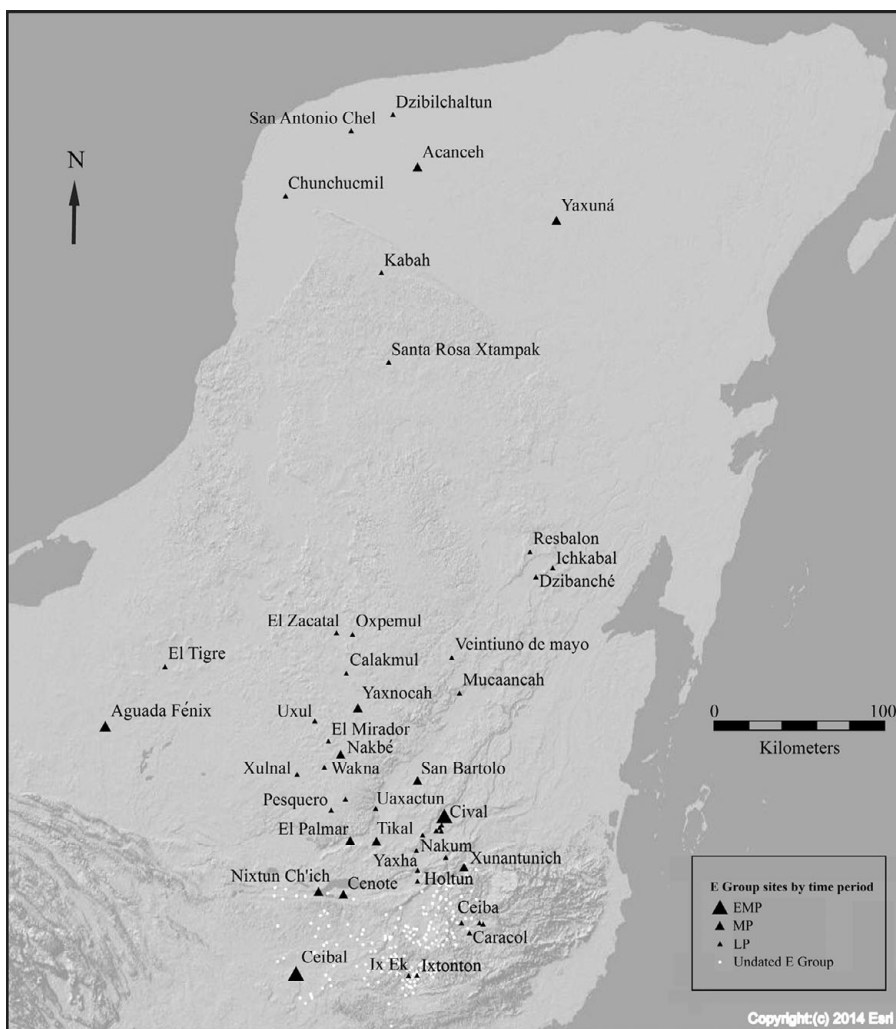
in the Classic period was populated by multiple, overlapping, and intersecting fields of interaction; it was thus an integrated entity within which people of different sociopolitical statuses and competences depended on one another. Recent lidar data's support for even higher lowland populations only cements the idea that lowland Maya society developed a robust and long-lasting urban landscape between 1000 BCE and 900 CE.

Among the many questions that now can and should be posed of lowland Maya urbanism, one of the most important is: What were the original causes for the nucleation of populations in the lowlands, which triggered the processes that would irremediably transform lowland Maya society along with its landscape? Were the initial processes of nucleation sparked by the same concerns that compelled urbanism in the Classic period? Or, were the pressures and needs sprouting from nucleated settlement secondary, or unintentional, consequences of solutions meant to address other concerns? And if so, what were those concerns?

INSTITUTIONAL PRECONDITIONING

Recent research on the earliest phases of lowland Maya society has pinpointed the architectural form that often precedes other public efforts: the building complex known as the “E Group.” First recognized in the 1920s during the Carnegie Institution's research project at the lowland Maya site of Uaxactun, the “E Group” derives its name from that site's Group E complex, which was immediately recognized as being some type of observatory for the motion of the sun along the eastern horizon (Blom 1924; Morley 1925; Ricketson 1928). It was soon surmised that this architectural configuration, and others like it that were being found throughout the Maya Lowlands (Fig. 4.2) (Ruppert 1940; Ruppert and Denison 1943), retained an important ceremonial function tied to the solar cycle, the prediction of solstices and equinoxes, and were thus linked to elite efforts to control and manage agricultural cycles (Ricketson and Ricketson 1937). Importantly, Karl Ruppert and John Denison (1943: 5) noted early on that many E Groups did not replicate the alignments of the Uaxactun group.

Further research on this architectural complex at other sites in the southern lowlands (Chase 1985; Chase and Chase 1995; Fialko 1988; Laporte and Fialko 1995) cemented the E Group as “one of the first hallmarks of Maya public architecture . . . [whose] appearance at sites is taken to be indicative of the coagulation of a formal ritual community in which there was broad participation” (Chase and Chase 2017b: 59). Based on Frans Blom's precocious identification of the astronomical function of E Groups, scholars suggested a connection between these architectural complexes and the ritual celebration of agricultural cycles (Aimers 1993; Cohodas 1985; Stanton and Freidel 2003).



4.2. Map of locations of Preclassic E Group sites (confirmed and unconfirmed) in the Maya Lowlands, with symbols indicating relative dates (LP = Late Preclassic, MP = Middle Preclassic, EMP = Early Middle Preclassic). Southeastern Petén E Group and Caracol data courtesy of Adrian Chase (Chase and Chase 2017b). Basemap data by ESRI. Image credit: Francisco Estrada-Belli

Considering the growing evidence for the importance of the mythology of the Maize God to lowland Maya society (see Stanton and Collins, [Chapter 5](#); Taube et al. 2010), it was proposed that the “spread of the E Group complex might indicate the innovation and diffusion of this new ritual technology for the assurance of agricultural prosperity in maize production” (Aveni and Dowd 2017: 91). Consistent with this view, James Doyle (2013a) noted that the earliest E Groups have the same proportions as agricultural plots known as milpas. He suggests that this parallel could reflect some fundamental agricultural metaphor

for the function of the E Group, an interpretation consistent with the “maize theaters” model provided by Stanton and Freidel (2003).

The most recent research has underscored that E Groups were integral to, as well as ubiquitous in, the early stages of lowland Maya urbanism (Fig. 4.2) (Aimers and Rice 2006; Doyle 2012; Freidel et al. 2017). Recognition of the E Group’s salience in the earliest phases of Maya sites led to their association with the rise of sociopolitical complexity among the lowland Maya; as Chase and colleagues (2017: 20) phrased it, “E Groups were important places for the establishment of ruling elites at any given site.” Their relevance to the celebration of the agricultural cycle of maize, and their tandem association with the development of sociopolitical complexity, led to the proposition that “Group E complexes existed at the onset of developing degrees of religious institutionalization and emerging sociocultural complexity, which in turn may have created the need for formal temple precincts, suggesting that religious ideology and its performance had a pivotal role in the growth and emergence of sociocultural complexity in the region” (Dowd 2017: 547). As a result, E Groups have been interpreted as the materialization of the religion-based institution of lowland Maya kingship that provided the basis for the eventual proliferation of the “divine king” (*k’ujul ajaw*) title in Maya hieroglyphic inscriptions.

Current scholarship suggests that the E Group’s ceremonialism represented a new medium (monumental architecture) for a narrative about notions of identity, time, origins, and place. As such, it represented the material manifestation of an inclusive ideology that, by 1000 BCE, undermined barriers among regional groups in favor of a new pan-lowland identity. Local identities remained salient, though mitigated by a common ideology (Estrada-Belli 2011, 2012; Inomata et al. 2013, 2015a). According to Doyle (2017: 9–10), “Preclassic Maya cities can thus be seen as early creations engendered by proximity that attracted people through experiencing novel attitudes and events.” These early nexuses provided the pre-conditions for the development of complex institutions that gave meaning to external influences. While their relevance and role in the eventual development of sociopolitical complexity seems likely, it bears noting that E Groups in later periods might not be perfect reflections of their Middle Preclassic antecedents. As Inomata noted, “The original E Groups were probably created with intentions and narratives much different from those of later periods . . . For the residents of the Maya Lowlands before 700 BCE, E Group assemblages probably signaled their participation in the pattern of cultural practice shared across wide areas” (Inomata 2017: 240–241). It is thus possible to consider that the earlier heterogeneity of the E Group’s form and spatial dimensions might also represent heterogeneity of meaning and function among the different communities responsible for constructing such architectural forms (Simova 2018, 2019; Simova et al. 2018). Scholars have suggested that monumental architecture was simply the material

consequence of a distinct goal: the coordination of collective activity (Joyce 2004b; Pauketat and Alt 2003). Accordingly, the earliest E Groups in the Maya Lowlands could be better (or, at least, also) interpreted as the material result of a social goal: the deployment of labor and resources for the sake of community integration.

While the pre-conditions for subsequent state formation might indeed have existed at all of these early “places,” the spatial and material rationales for and consequences of E Group construction did not, in fact, obligate the development of those institutions for which they were the pre-condition. This fact suggests that these early “places” may not have been aimed at the constitution and justification of sociopolitical hierarchy at all; rather, they were intended to help integrate larger and larger groups. Considered in another way, we might ask what the early Middle Preclassic lowland Maya conceived these places as being? What functions would they have acknowledged for these places? Secondarily, one might also ask, what *other* conditions, above and beyond those that resulted in the construction of these “places,” contributed to the adoption of institutions of inequality and hierarchy?

CH'EEN, A MAYA VIEW OF URBANISM

Before reviewing the evidence for early urbanism in the Maya Lowlands, it behooves us to plumb the epigraphic record to determine what kind of terminology the Maya associated with “cities.” Here we find the same complications as in the ruler-first model that has dominated Maya scholarship of early urbanism. Most models of lowland Maya urbanization (Adams and Smith 1981; Demarest and Conrad 1992; Golden and Scherer 2013; Houston 1997; Inomata 2006; Lucero 2006; Marcus 1993; Martin and Grube 2008; Mathews 1991; Sharer and Golden 2004; Webster 1989), whether advocating for a strong, weak, or segmentary state model, tend to focus on the king as the pivot point for the center and without whom urbanization would not be possible. Was this the way the ancient lowland Maya saw their cities? Were the centralizing actions of the divine ruler sufficient to create a circumscribed and finite place on the landscape?

Despite the limited thematic scope of lowland Maya public texts, we find several hieroglyphic signs and terms relating to entities relevant to lowland Maya cities. Perhaps the most recognized and ubiquitous is the “emblem glyph” (Berlin 1958; see Tokovinine 2013 for discussion). Often interpreted as signifying a “polity,” the emblem glyph is actually a title composed of a “holy lord” designation and a variable sign that was understood as toponymic, autonymic, or patronymic. This interpretation was built into a consensus by a myriad of “city-state” models proffered by various scholars (Adams and Smith 1981; Marcus 1983; Mathews 1991). It now seems, however, that the majority

of emblem glyphs mark the names of royal houses, often passed down generationally, but with what must be at least a few fictive components. There are probably several different sources for the actual names, including toponyms, totemic labels, and probably even personal names, but their function seems to be as house names, comparable to *calpolli* designations in the Nahuatl language of the Aztecs (Zender 2014; also see Arroyo, Chapter 6; Love, Chapter 1; and Stanton and Collins, Chapter 5).

The most celebrated example is the *Kaanu'l* emblem glyph. It is associated during the Classic period with at least two centers for at least four centuries, if not longer. The *Kaanu'l* emblem glyph could refer to a territory or a dynastic name; however, it is now certain that it referred to a capital city itself from which the dynasty name derived. Recent discoveries have shown how the *Kaanu'l* kings moved their capital from Dzibanché to Calakmul after an intra-dynastic conflict that appears to have involved competing ruling factions (Helmke and Awe 2016a, b). Once the conflict was resolved, the royal emblem was transferred to Calakmul to signify the new seat of power; it also supplanted the emblem glyph that had previously been used at Calakmul before being incorporated into the *Kaanu'l* state (Martin 2005). Interestingly, the kings of the new capital could be referred to as “he of Chik Naahb” or “he of Uxte’tuun” as well as by the emblem glyph that signified “holy *Kaanu'l* lord” (Martin and Velásquez 2016).

It is therefore clear that cities and political entities were not necessarily one and the same and that the popular idea of a lowland Maya landscape filled with peer city-states, each with their own divine ruler who bore the responsibility for the existence of that particular center, is unlikely. While the majority of emblem glyphs were associated exclusively with a single lowland center, several exceptions suggest a more abstract notion of political identity not tied exclusively to a single site. Furthermore, another indication of the emblem glyph’s *calpolli* or house-like orientation, which conveyed a civic or corporate identity, is their use of the agentive *aj-* as a prefix. When the prefix is attached to the emblem glyph main sign, in forms like *aj-kaanu'l* “He of the Place of Snakes,” for example, the glyphic compound denotes both the individual’s location and dynastic origin.

A more direct term for “city” as *a built place on the landscape* does also exist (Bíró 2011: 67). In Prehispanic times, the cognate terms *ch’een* and *kaaj* carried similar meanings. Though *kaaj* is very rare in hieroglyphic sources, *ch’een* is a common referent for a human settlement or city. According to Simon Martin and Erik Velásquez (2016: 25), although it “literally means ‘cave, well, canyon, hole, rock outcrop,’ the *ch’een* of the inscriptions rarely refers to such features; the vast majority of examples appear instead within a metaphorical complex that defines places in some generic and culturally defined sense . . .”

It is important to recognize that *ch’een* is not a literal translation for city. Rather, it “refers to the smallest unit of the landscape with the meaning of

‘inhabited place, settlement’” (Bíró 2011: 66), and intimated a settlement with buildings within a natural landscape. More than that, it was part of an “imagined landscape” that consisted of “‘built inhabited places’ and natural phenomenon” (Bíró 2007: 96). Therefore, “settlement” or “city” are only approximate glosses, and do not capture the association with sacred places, temples, and houses of gods that are also subsumed in the meaning of *ch’een* (Tokovinine 2013: 34).¹

The word *ch’een* was also, at times, paired with the word *kab*, “land/territory” (Stuart and Houston 1994: 7–13), creating one of several noted diphrastic kennings in Classic Maya writing (Knowlton 2002). The true meaning of *kab ch’een* remains elusive, but it may simply incorporate two concepts into a single phrase for a political entity: the city, as the place of gods and kings, and its territory (Tokovinine 2013: 33–38). Interestingly, use of the term persisted throughout lowland Maya history: colonial documents written in the Yucatec Mayan language use *ch’een* and *kab* more or less interchangeably as terms for settlements (Lacadena García-Gallo 2009: 46; Tokovinine 2013: 23–25).

Whatever the metaphorical nuances of the term, it seems clear that the lowland Maya indeed distinguished between the notion of a constructed, inhabited place – *ch’een* – and the political entities that it helped constitute, whether through the diphrastic kenning of *kab’ ch’een* or through the emblem glyph that coupled a royal title with a toponym. The existence of this apolitical term for a constructed, inhabited place may represent an age-old notion that was associated with the earliest Middle Preclassic settlements (as at the site of Cival, discussed below), which were primarily spaces for the veneration of deities built near bodies of water such as sinkholes, swamps, or lakes. We argue below, in fact, that when we consider the development of early centers in the Middle Preclassic, we are observing the phenomenon that the Classic Maya referred to as *ch’een*. Among all of the locations that constituted an early *ch’een*, however, only some became political centers that would have called for a more elaborate designation than that of simply *ch’een*; for those centers, the term *kab’ ch’een* and the use of emblem glyphs would eventually develop during the Classic period.

In other words, there is no reason to assume that, from their inception, the earliest *ch’een* were conceived as monuments to hierarchy and loci where inequality was made to enchant. We are therefore left with the idea that early Middle Preclassic Maya urbanism involved the construction of *ch’een* whose

¹ Several authors (Martin 2004: 106–109; Martin and Grube 2000; Tokovinine 2013; Velásquez García 2004: 84–85) have argued that events referred to as *och ch’een* in the inscriptions refer to “settlement-entering” in the sense of an invasion; they also point out that war events, likely describing conquest, refer to locations as “the *ch’een* of” defeated kings.

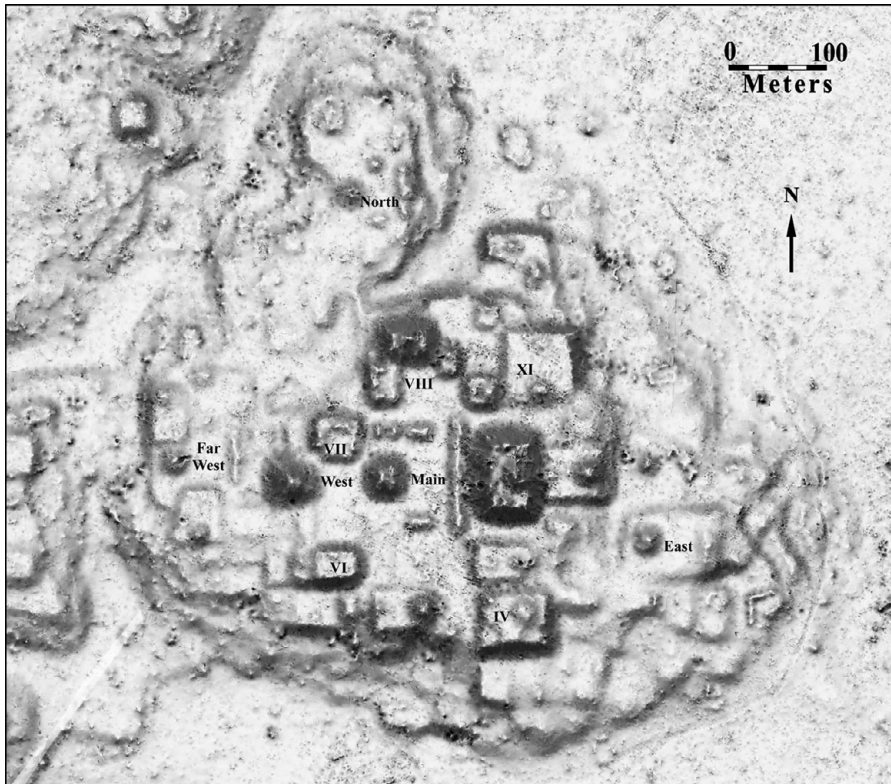
primary role was to integrate expanding populations by providing a constructed space for the coordination of events, redistribution of goods, and the practice of public ritual. Political centralization and the hierarchical institutions that resulted from that process would have come as consequences of the *ch'een*, rather than inspired it.

FIRST *CH'EEN*, FIRST PRINCIPLES

To address these questions in greater detail, we must contemplate the dialectic between the processes of urbanization and the historically contingent factors that led to the first “agglomerations” in the Maya Lowlands. In other words, can we determine the earliest politics of space in the ancient Maya Lowlands? When we look to the evidence of the earliest attempts by the lowland Maya to construct large urban centers, we must ask: Were ancient Maya cities the unintended consequence of processes of interaction, or were they creations, founded “at once, all entire in a day” (Fustel de Coulanges 1963: 134)? As Doyle (2017: 8) notes: “The intense episodes of planning that must have guided the ancient builders in the Preclassic Maya Lowlands have not received adequate attention, other than brief conclusions that planning implies centralized institutions.” Here we seek to look into how the activities of measuring, moving, clearing, and building impacted the social relations of expanding lowland Maya groups.

While the oft repeated adage “Rome was not built in a day” likely does apply here, it is possible to see in the recent research from Middle Preclassic Maya sites such as Ceibal (Inomata et al. 2013), Cival (Estrada-Belli 2006, 2011), Nakbé (Hansen 1992, 1998, 2001), and El Palmar (Doyle 2017) that, while lowland Maya cities were not *built* in a day, they likely were conceived as centers of a newly formed community from their inception (see Fig. 4.1 for locations). That is, it appears that foundational events began with major terra-forming efforts aimed at the creation of a massive open space – a plaza – suitable for public gatherings. These monumental efforts at rendering spaces suitable were place-making mobilizations of labor, which also resulted in the laying out of the axes of the site. Subsequent to these monumental efforts – and almost equivalent to a modern “ribbon-cutting” ceremony – important items of exotic materials, relevant to basic religious principles, were cached in the newly crafted plaza, “activating” it for subsequent construction. Evidence suggests that, in the lowest, sterile levels of several Middle Preclassic sites, the premeditation of a large planned monumental space followed certain first principles of spatial proportion and architectural composition that coincide with the concept of *ch'een* (also see Stanton and Collins, Chapter 5).

In the case of Cival, for instance, a Middle Preclassic cache on the east-west axis of the E Group in the Main plaza (Fig. 4.3) contained one of the largest



4.3. Lidar map of Cival showing E Group plazas (including the Main plaza and those marked North, East, West, and Far West) and palatial complexes (labeled with Roman numerals). Topographic lidar data courtesy of PACUNAM. Image credit: Francisco Estrada-Belli

concentrations of jade in the Maya area, and reflected craft specialization, long distance trade, and conspicuous consumption (Estrada-Belli 2011: 80–83). Similar caches have been found in equivalent contexts at Ceibal (Inomata et al. 2013). In other words, preparation of the “inner city” – the ceremonial core – was enacted *before* construction of those elements that would comprise the place and render it a *ch’een*.

These efforts in the southern Maya Lowlands largely parallel those at Mesoamerica’s first monumental center, San Lorenzo, in the Gulf Coast Olmec region (see Pool and Loughlin, Chapter 3). Research there has shown the critical role that massive terraforming played in the development of socio-political complexity in that region. Ann Cyphers and Judith Zurita-Noguera (2012) demonstrated that a long-standing tradition of widespread landscape modification in the low-lying Coatzacoalcas region gave rise to a concentration of surplus labor into major projects of land reclamation and alteration that both reflected and further transformed the sociospatial patterns of the region. As such, San Lorenzo became a “politicized space” resulting from and further naturalizing emergent sociopolitical hierarchies.

In some ways, the foundation process in early Maya ceremonial centers has striking parallels in the Old World. Prior to the foundation of Rome in the eighth century BCE, seven rival tribes with residence and land rights were attached to seven hilltop settlements. The creation of a new identity centered on the innovative concept of the *urbs*, which was different in many ways from the proto-urban Iron Age settlement and required new, integrative strategies to mitigate existing tribal rivalries. Rome's foundation process involved the choosing of a central location by laying out a "templum in terra," a cardinally oriented enclosure for the observation of celestial divinatory signs (bird flight) that thereby sanctified the foundation locus (Carandini and Cappelli 2000). A key component of the new *urbs* was the *comitium*, an open forum that provided a neutral space for public discourse among pre-existing tribal leaders. Likewise, for the lowland Maya, newly terra-formed spaces also would have provided the locus for the communal interaction of tribal leaders. Furthermore, as in the case of the Roman *urbs*, pre-existing Maya settlements located near and around the newly established central spaces continued without significant change for some time.

THE BIRTH OF THE PUBLIC SPHERE

Once a Middle Preclassic Maya location was cleared and sacralized, the plaza was outfitted as a monumental complex. The suggestion that these monumental complexes became E Groups is supported by numerous recorded cases of Middle Preclassic centers whose founding included, initially, only an E Group plaza built directly on bedrock or basic masonry platforms; examples include Cival, Ceibal, El Palmar, Cenote, Tikal, Chan, and Xunantunich, among others (Chase 1983; Doyle et al. 2011; Estrada-Belli 2006: 38; 2011; Hansen 2002; Inomata et al. 2015b; Laporte and Fialko 1995; Prufer et al. 2011; Robin 2017). In many cases, the foundations occurred on unoccupied hills and included the removal of topsoil and the sculpting of steps and platforms into the soft limestone rock. In a few notably late examples, the new space was prepared by covering pre-existing residential structures. Whatever the specific case, it is clear that the place-founding efforts, which involved the clearing and levelling of large areas, would have fit, easily, the skillset of farmers adapted to both wetland and upland agriculture.

In this fashion, early Maya lowland sites provided a spatial context in which new ideological narratives mitigated tribal/ethnic divisions, which would have been developing among increasingly large groups whose membership was steeped in the egalitarian sociocultural traditions typical of semi-nomadic farmer-hunters. Importantly, these architectural complexes show an early standardization that speaks to the fact that, in this early period, lowland Maya peoples shared notions of how to order both space and time (Aimers

and Rice 2006; Chase and Chase 1995; Fialko 1988; Ricketson and Ricketson 1937; Ruppert 1940). However, embedded in these shared notions were salient variations. Differences in the dimension and orientation of E Group architecture are prevalent, suggesting that additional sets of meanings may have been in play as E Groups were laid out. Because of the seemingly random variation, these meanings may have been of predominantly local significance, and may have corresponded to the geomantic functions of architecture tailored to the specifics of the surrounding landscape (Estrada-Belli 2017).

Whatever the shared, as well as local, meanings were, E Groups and associated spaces were built by subsistence farmers to provide a context and medium for interaction and ceremony beyond the household group; as such, they were *public spaces* wherein different identities and interests were mediated (contested, integrated, supported, or undermined). The public forum for mediation provided by these early centers, however, was irremediably inflected by the accumulation, synchronization, and organization of labor required for their construction. Accordingly, those practices necessary for the deployment and organization of labor likely further modified the nature of the relations that compelled the construction of these E Groups. They were not just public spaces; they were owned, in corporate and communal fashion, by those involved with their construction. As such, they fomented a sense of place and belonging.

In recent work on early Middle Preclassic settlements in the southern Maya Lowlands, Doyle (2017) suggested that the “concentration of diverse functions, services, and activities” was the impetus for the development of these new hubs (also see Marcus and Sabloff 2008: 21). Perhaps it is more productive, however, to consider this concentration as a happy consequence – rather than the cause – of their construction. The earliest lowland Maya efforts to construct public spaces and monuments resulted in E Group complexes without any overt allusion to rulership (see also Inomata et al. 2015a). It would seem that these constructions emphasized aspects that later Maya would encompass in the term *ch’een* – caves, temples, and bodies of water – that implied shared notions of origins, identity, and belonging. The sacralization of the space was thus an effort to lay claim and establish privilege over the landscape encompassed by the cosmo-grammatic extensions of the central E Group.

In addition to the absence of clear references to kingship, Middle Preclassic Maya centers were also characterized by the total absence of overt references to militarism, at least in terms of iconographic components and ritual offerings. Such references took center stage in Maya iconography in later phases of lowland Maya history, to be sure, as they did at other urban centers throughout Mesoamerica (see, for example, Guernsey 2018; Joyce, Chapter 2). To this extent, Middle Preclassic Maya centers seem analogous to coastal Peruvian sites like El Paraíso or Cardal (Burger and Rosenswig 2012). It is also possible that,

in this regard, the Middle Preclassic city may have fundamentally differed from its Classic and Postclassic Mesoamerican descendants.

It is important to note and appreciate that overtly political messages would eventually be embedded within E Groups, as when elite burials intruded upon these architectural complexes. These later changes suggest the institutionalization of differential access to erstwhile public spaces; or, we might say, following M. Kathryn Brown (2017: 386), that “these sacred locations played a central role in the establishment and legitimization of new hierarchical social institutions.” Nevertheless, the majority of elite burials in public spaces at monumental centers long post-date the development of political hierarchy, generally appearing first in the Terminal Preclassic period. At that time, a clearer pattern of appropriation of formerly public spaces by elites is seen in the placement of burials on top of buried temples. In fact, it seems plausible that the eventual appropriation of E Groups at the end of the Late Preclassic for burials was more akin to a subversion of long-standing traditions that, previously, had excluded individual symbolism from these public spaces.

By 700 BCE, pan-regional norms had developed through the shared and standardized communal experiences at similar monumental centers throughout much of the lowland Maya region. It is interesting to consider this homogeneity in light of the great variety of lowland Maya ceramics *prior to* the Middle Preclassic period (Awe et al. 1990; Cheetham 2005; Clark and Cheetham 2003; de Estrada 2014; Hammond et al. 1995). Ceramic variety was dissolved by both the expansion of Middle Preclassic Mamom-style ceramics (R. Smith 1955) and the E Group-plaza complex. It would seem, in other words, that the replicative nature of practices leading to urbanization throughout the lowland Maya area was salient. As Doyle (2017: 36) phrased it, the southern lowland Preclassic Maya “seem to have drawn from a similar inventory of monumental architecture and spaces across a wide geographic area and between seemingly unrelated groups of people” (Doyle 2017: 36). This homogeneity of thought and procedure in the earliest efforts of urbanization – materially manifested in architectural terms and in ceramic inventories – offers the most convincing argument for the existence of the shared concept of the *ch’een*.

It is clear that, from their inception, early E Groups were not laden with symbolism aimed at making inequality enchant. The data suggest, rather, that these early central urban precincts were already in existence when strategies aimed at the justification of institutional inequality eventually implicated them. In this way, Jennings’s (2016) model of urbanism leading to the development of sociopolitical complexity is consistent with the lowland Maya data. The earliest Maya centers do not appear to have developed as a consequence of those political strategies that they would eventually engender. This pattern is made no more manifest than by the fact that not all early centers with E Groups appear to have survived throughout the Preclassic period; it is likely

that they were incapable of “balancing antiquated systems of shared power with the need for developing new means of organizing and directing increasingly large urban communities” (Kuijt 2000: 98).

THE STANDARDIZATION OF MOVEMENT

In the latter half of the Middle Preclassic period, additional constructions took place in association with E Groups in the southern Maya Lowlands. These took the form of broad elevated platforms supporting very few small buildings (Inomata et al. 2013). There is no direct evidence that might speak to their function, except perhaps their location. The few slightly later excavated examples of monumental platforms near Late Preclassic E Groups, like Group VIII at Cival (Fig. 4.3) (Estrada-Belli 2008: 44) or El Tigrillo at San Bartolo (Runggaldier 2009), for example, have the typical layout of early palaces (Clark and Hansen 2001; Inomata et al. 2013), and lack significant iconographic decoration on their facades. Nevertheless, the data suggest that successive architectural and material trappings of E Groups and their associated spaces bore explicit political messages.

By the beginning of the Late Preclassic period, Maya centers demonstrate greater complexity in the form of new architectural features, including acropolis platforms, pyramid complexes, ballcourts, and causeways surrounded by dense settlement zones (Fig. 4.4) (Laporte 2001). Large artificial reservoirs were built in ceremonial precincts to support elite residents, whereas the surrounding population relied on natural bodies of water (*civales* or “sinkholes”) and



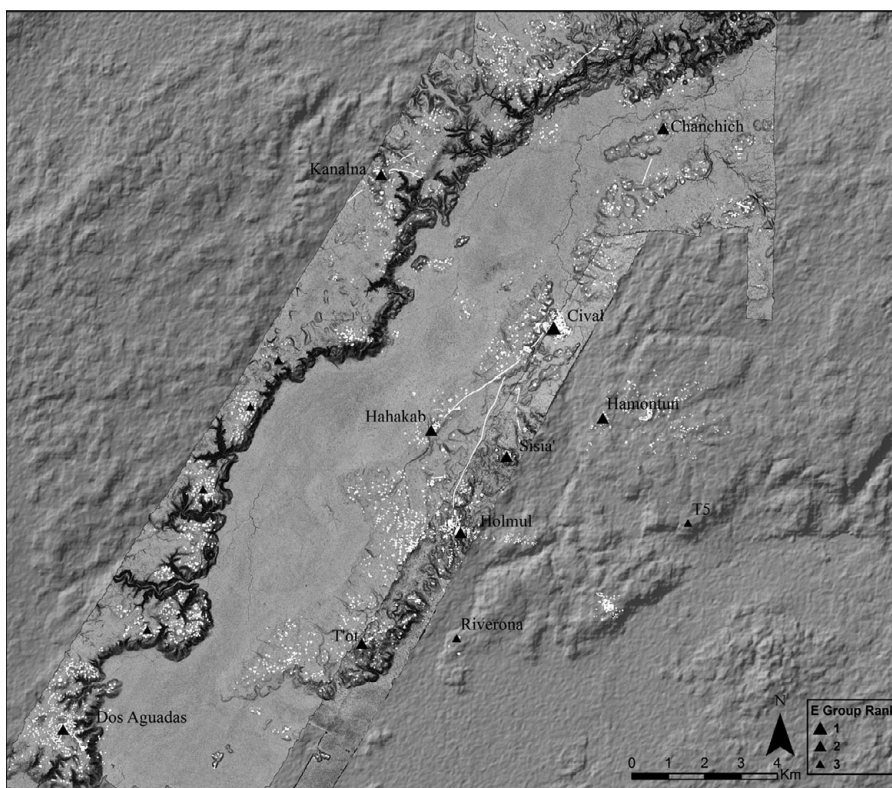
4.4. Artistic rendering of Cival’s monumental core during the Late Preclassic period. Image credit: PACUNAM/Francisco Estrada-Belli

family-size cisterns (*chultunob*) carved into bedrock. The basic settlement unit, the residential courtyard, now existed in a variety of sizes likely related to differences in status. Palatial complexes and pyramid temple complexes – a set of three or more buildings on truncated pyramids forming an enclosed courtyard elevated by a broad platform – formed smaller elevated spatial enclosures next to E Group plazas. These pyramid temple complexes, which gave rise to the ubiquitous “triadic groups” of Late Preclassic lowland Maya centers, provided a starting point for what over the centuries would develop into large complexes of monumental spaces that fused the celebration and commemoration of a shared creation mythology with notions of lineage, divine descent, and legitimate authority.

Moreover, throughout the Late Preclassic period, these buildings were adorned with massive stucco portrait “masks” of the gods relevant to creation mythology (Estrada-Belli 2011). Such programming enabled them to provide a space in which a (political) agent became associated with, and perhaps integral to, the successful maintenance and renewal of religious and cosmological precepts. Other key architectural programming included ballcourts, which also appear in the southern Maya Lowlands during the Middle Preclassic period. Ballcourts served not only as places of sport and spectacle but also as symbolic portals to the underworld, proliferating throughout later eras as the spatial obverse of the pyramid. They were also venues in which individual political agents could invoke shared mythological precepts, like those concerning the Maize God.

Monumental residential complexes were built at this time as well. These elevated courtyard platforms, in all aspects presaging Classic period palatial acropolis complexes, typically rose 3–4 m above the plaza and supported sets of two to four single-room, low-profile masonry structures arranged in the cardinal directions around an expansive courtyard. Access from the plaza was provided by a monumental inset stairway, which directed traffic through a “threshold” structure at its summit with front and rear axial doorways. At the opposite end of the court was the main structure, often housing a masonry bench throne facing the doorway and the elevated courtyard, but not visible from the plaza. Examples of these residential complexes are located typically in close proximity to E Groups, and form secondary plazas with triadic groups and ballcourts at Cival and San Bartolo (Estrada-Belli 2008; Runggaldier 2009). Several examples of these complexes exist at Cival, in fact, and include Groups IV, VI, VII, VIII, and XI (Figs. 4.3 and 4.4). Each of them was remodeled and enlarged at least once, and up to three times, during the Late Preclassic period, suggesting that successive generations of rulers may have chosen to build their own palace in the site core.

Finally, causeways radiating out from the main plaza served to bind centrally located architectural groups and their open spaces to outer civic-ceremonial groups (Fig. 4.5) (also see Stanton and Collins, Chapter 5). These causeways –



4.5. Map of the Cival region showing E Group centers marked by size in relation to known residential structures and causeways (both shown in white). Lidar data courtesy of PACUNAM. Regional topography derived from SRTM NASA mission data. Image credit: Francisco Estrada-Belli

or *sacbeob*, the plural of *sacbé* – facilitated development of a network of connected ritual shrines and secondary palaces in the main center’s hinterland; they also, perhaps, signaled a more formalized path through which to access previously open and public spaces.

In the outer hinterland of the Late Preclassic city there was a hierarchy of political and ceremonial nodes or ‘minor centers,’ a phenomenon that until recently was associated only with the Classic period (Bullard 1960). In the region around Cival, up to twenty secondary centers have been located within a 12 km radius (a half-day walking distance) (Fig. 4.5). Based on the size of their monumental cores and presence/absence of certain architectural elements, they appear to have formed a three-tier hierarchy. The largest, or second tier, of these centers includes the sites of Holmul, Chanchich, Hahakab, Kanalna, and Dos Aguadas, each of which featured – in addition to E Group plazas – triadic groups, ballcourts, palaces, and radiating causeways that connected the main plaza to outer monumental groups and, in some cases, to Cival itself (as in the case of Holmul, Hahakab, and Chanchich).

The smallest of the minor, or third tier, centers were interspersed among the secondary ones and minimally featured a small E Group plaza and palatial complex. This Preclassic pattern closely resembles and is a precursor to the distribution of major and minor centers in the Classic period. One distinctive characteristic of these Preclassic centers, however, is the uniformity – both in form and relative size – of the E Group plaza along with palace architecture, which is indicative of the close association between political and religious power at every level of the organizational structure of Preclassic society and the Preclassic landscape.

By 350 BCE, spaces for individuals had been inserted into the monumentality of the cities in order to facilitate the ruler's association with, and relevance to, shared religious ideals. The earliest images of rulers and hieroglyphic writing appear in the record of the southern lowlands by 200 BCE (Estrada-Belli et al. 2003; Saturno et al. 2006), but in all likelihood occurred at least a century earlier. It was also by the beginning of the Late Preclassic period that some Maya sites, along with society at large, had undergone significant permutations into something recognizable cross-culturally as an urban center and state capital. Several instances of mass burials of male adults dating to the Late Preclassic period at Cuello, Colha, and Río Azul (Adams 1999; Mock 1998; Robin and Hammond 1991) further suggest that militarism had grown in importance along with the development of full-fledged urbanism and kingship.

CONCLUDING THOUGHTS: URBAN UNANIMITY

In this brief summary we have emphasized how the southern lowland Maya center in the Preclassic was conceived “at once” to provide a locus for the economic and political activities inherent to non-kin-based interaction and community identity development. With time, these centers increasingly became the loci of power and commercialism. In fact, by 200 CE, palaces and royal funerary shrines became salient features of the lowland Maya cityscape. Palaces, which became nearly ubiquitous, proved critical to the consolidation of new modes of political authority that involved a more private and exclusive mode of interaction (Houston et al. 2003; Inomata 2001a, 2006; Inomata and Houston 2001). By the Classic period, multi-courtyard palaces, especially in large sites such as Calakmul and Tikal, reflected the expanding administrative authority of rulers beyond their duties as divine kings. For the few cases in which royal centers were newly founded, such as Cancuen, El Zotz, La Corona, or La Sufricaya (Barrientos 2014; Estrada-Belli et al. 2009; Román Ramirez 2017), we see how the palace and attached royal ancestral shrines and monuments became, by and large, the essence of the newly defined Maya urban experience.

This chapter has focused on some of the salient architectural and conceptual markers of southern lowland Maya urbanism during the Preclassic period. What these developments demonstrate is that lowland Maya centers were not, in fact, “unplanned,” despite the fact that they did not demonstrate grid-like layouts or rectilinear entrance and exit patterns (Marcus 1983: 196–197). There is one potential case of *sensu stricto* formal urban planning at the site of Nixtun-Ch’ich’, which appears to adhere to a grid (Pugh and Rice 2017; also see Love and Rosenswig, Chapter 7, for the Late Preclassic gridded city of El Ujuxte on the Pacific Coast). Most centers demonstrated a careful and deliberate development of their public spaces, and it is important to recognize that such planning is inconsistent with the “growth by accretion” model often attributed to the lowland Maya city (Rice 2006: 269). Equally significant is recognition that the growth and development of public urban spaces was due to complex responses to changing social realities, which likely resulted in a variety of configurations.

It is clear that early settlement aggregation correlates with early public architecture in the Middle Preclassic period (following Adler and Wilshusen 1990). Conglomerations of people also would have triggered changes in the way these populations produced and consumed foodstuffs and material goods. Aggregated populations would have modified their own conceptions of “labor” as collective action, and would have permitted efforts previously beyond the reach of smaller groups (Kowalewski 2013). Such changes would have impacted the daily lives of Preclassic people as they experimented with social groups of unprecedented size.

Research on early monumentality throughout the ancient world is demonstrating that some highly organized efforts in the construction of large public buildings were undertaken by populations who did not conform to the traditional definition of sedentary agriculturalists. At places such as Göbekli Tepe in Anatolia, as well as Watson Break and Poverty Point in the southeastern United States (Dietrich et al. 2012; Saunders 2004), monumental constructions appear to have been undertaken by mobile groups rather than by long-term sedentary populations. In fact, growing evidence from the Neolithic period in southwest Asia (Watkins 2010) suggests that village life developed as a consequence of, rather than precondition for, growing populations. These sequences compel researchers to reconsider the age-old notion that public architecture is the material reflection of *already existing* sociopolitical hierarchy (see Gibson and Carr 2004). Scholars must appreciate that the processes that led to sociopolitical complexity were often tied to *already existing* spaces.

In the southern Maya Lowlands, early cleared spaces, E Groups, and associated public venues created the spatial arena for social experimentation. Early centers were thus lynch pins in what Stephen Kowalewski (2006) calls a

coalescent society, in which major settlement changes and scalar stresses triggered a multitude of processes, responses, and institutions. These processes in the Maya region included an increase in trade, the construction of public architecture and public spaces that encouraged and enhanced community integration, the sponsorship of collective ideology and rituals, and participation in mythic narratives that justified group existence and structure. In short, if we are to understand early Maya urbanism, we must combine the notion of *ch'een* with the attendant changes a coalescing society faces. In fact, the former is likely the result of the latter – that is, expanding trade, increasing population size, and extended group membership made “everyone’s world a whole lot bigger,” necessitating integrative mechanisms anchored on the new shared notion of *ch'een*.

Early urbanism in the lowland Maya area has often been viewed as the consequence of increasing sociopolitical complexity (see Freidel et al. 2017). While the development of both are indeed related, it is more fruitful to focus on how and why these early settlements coalesced in the first place rather than on how they provided the “pre-conditions” for later complexity (see Simova et al. 2018 for such an analysis). In this vein, we can appreciate that the Middle Preclassic Maya Lowlands witnessed a process by which “people living in small dispersed village communities came together into larger and more complex social formations . . . situated between prehistoric villages and emergent chiefdoms and states” (Birch 2013: 1).

Early Maya urbanism was thus an exercise and declaration of mutual belonging to a place. How did these notions of urbanism alter the ways in which the members of groups interacted? What developed outside the strict parameters of a particular construction program? How were communities fostered or undermined by these urbanscapes? It is clear that we have moved far beyond Childe’s distress over the Maya case. However, we are now tasked with a greater challenge: How did the historically contingent lowland Maya urban “explosion” impact the way in which the lowland Maya viewed themselves and their world? We suggest that what remains underdeveloped in all of this research is the underbelly of urban existence, those unintended results of urbanism – the identities that are forged above, beyond, or despite the best intentions (Canuto and Fash 2004; Peuramaki-Brown 2013; Yaeger 2003a).

CHAPTER FIVE

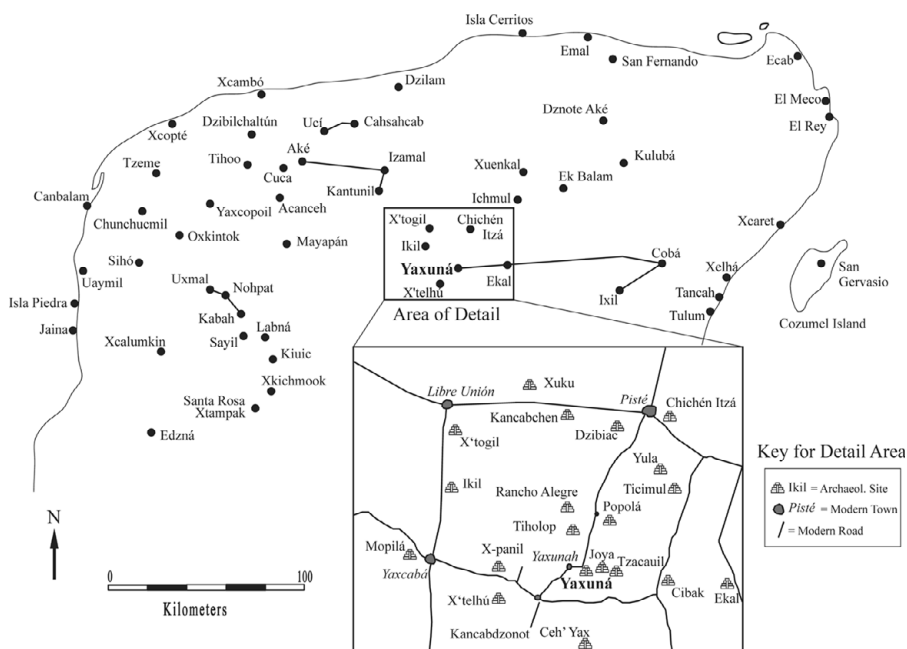
THE ROLE OF MIDDLE PRECLASSIC PLACEMAKING IN THE CREATION OF LATE PRECLASSIC YUCATECAN CITIES

The Foundations of Yaxuná

Travis W. Stanton and Ryan H. Collins

OVER A LITTLE MORE THAN THIRTY YEARS AGO, WILLIAM SANDERS AND David Webster (1988) published an influential article that drew the attention of scholars towards the variability of Mesoamerican urban centers. While focusing on pigeonholing this variability into neat typological categories, they in passing state an obvious but important fact: all societies exhibit centralizing processes. Their interest at the time, however, was to try to understand those centralizing processes in the context of periods after the first development of urban centers, disassociating the Classic and Postclassic examples they employed from the Preclassic behaviors that gave rise to and shaped the ideas of later cities.

Despite Sanders and Webster's controversial resistance to using the term 'city' when referring to Maya urban centers, most archaeologists working in southeastern Mesoamerica have accepted that the Maya created cities and that some of those cities were present much earlier than we had previously imagined (e.g., Canuto and Estrada-Belli, Chapter 4). Yet how we understand the emergence of these cities in such an early context is still a matter to be resolved. In this chapter we discuss the case of Yaxuná, a site in Yucatan, that we consider to be a city by the Late Preclassic (Fig. 5.1). Our interest here is not so much to explore Late Preclassic cities, however, but to understand how the transition from a semi-sedentary Late Archaic lifestyle to fully settled life influenced the particular path that the early Maya at Yaxuná, and elsewhere, took towards the creation of cities. We aim to analyze how strategies of social integration changed over time, specifically focusing on how early village



5.1. Map of the northern Maya Lowlands with detail of Yaxuná region. Map by authors

place-making practices, centered on communally based ritual spaces employed in the celebration of the agricultural cycle, morphed into truly monumental and more restrictive performance spaces utilized by ritual suzerains at cities towards the end of the first millennium BCE. While hundreds of years before the existence of cities in the Maya Lowlands, the period of transition from the Archaic to the early Middle Preclassic (2000–1000 BCE) is germane to the discussion of urbanism in the Late Preclassic (300 BCE–250 CE) given that it establishes the cultural context of centralizing processes at the outset of settled life in the northern Maya Lowlands. We argue that the manner in which Yaxuná, and other sites like it, were established as population aggregation centers at the beginning of the Middle Preclassic profoundly impacted the structure and functioning of Late Preclassic cities when they emerged, despite the drastic changes in social, political, and economic relationships Maya society experienced over the span of time that separated these moments. It is our contention that the kinds of places first created by the lowland Maya to centralize populations transitioning to a fully sedentary way of life used similar ritual, economic, and social aggregation strategies as later cities.

THE EARLY MAYA CITY

In many ways, the idea of a city is culturally contingent (Joyce 2009: 189; M. L. Smith 2006: 106). While the size of settlement has often been taken to be one

of the great measuring sticks of what constitutes a city (e.g., Gates 2003: 2), we are all very well aware that cities are much more than just a simple congregation of a copious amount of people living together (Childe 1950). Yet, what that ‘more’ consists of has been a matter of debate among social scientists and geographers for some time. High population densities, the presence of a ruling class, and the diversity (e.g., ethnicity, class, wealth, occupation) of inhabitants, among many other factors, have also been considered to be critical components of cities by archaeologists (e.g., Childe 1950; Hutson 2016; M. E. Smith 2002; M. L. Smith 2006; Wirth 1938). There is not always clear consensus, however, about how we should apply these categories in analyses of ancient settlements, especially as they concern varying yet dynamic social experiences, forms of specialization, and markers of identity unique to distinct cities, all intertwined into larger cultural modes of operation in the built environment (Joyce 2009; Low 1993). We seem to agree that it is not enough that the experience of living among several thousand densely packed people in a place like Çatalhöyük (in modern Turkey) was vastly different for its Neolithic inhabitants than the experience of living in virtually any other settlement at the time to classify it as a city. Çatalhöyük lacked many of the basic criteria academics use to define cities, such as a recording system and a ruling class (Hodder 2012: 165). Yet the root of Sanders and Webster’s (1988) doubts concerning the classification of some large Maya settlements as cities hinges on researchers’ flexibility, or lack thereof, in defining what a city should be. Fortunately, recent definitions of urbanism in the archaeological literature have broached the need for such flexibility (Joyce 2009; M. L. Smith 2006; Yoffee and Terrenato 2015), leading to the consideration of a greater range of urban settlements including those in lowland Mesoamerica that Sanders and Webster once rejected.

As Monica L. Smith (2006: 101) notes, the contingent nature of the cultural construction of cities and other settlements goes beyond academia. For example, communities of 15,000–20,000 in modern day Yucatan are generally called “towns” by modern Yucatecans, often in comparison to the regional “city” of Mérida (currently near 800,000 within the formal city limits), despite the fact that they meet the other criteria for cities (see Low 1995). There is a perceived rurality to these smaller cities, a feeling that they cannot be urban in any true sense since they lack the trappings (large modern malls, car dealerships, work opportunities, wealth, etc.) and sheer population numbers that the larger modern cities have. Under no uncertain terms, these settlements, in the ancient world, would have qualified as cities for academics. But they are ‘demoted’ in popular culture based on a perceived lack of ‘city-ness’ relative to larger and wealthier places.

The point of this discussion is that the notion of a city (or, just as readily, one of states) can vary by cultural context and this is important from both emic and

etic standpoints. From an etic perspective, although we may now embrace a range of variability in ancient urban societies, we must still define the parameters of what can constitute a city since there is no general consensus in the field; clarity is key, and while we understand that urbanization is a dynamic process, we must be able to clearly articulate what we mean by terms such as “cities” and “towns.” In this chapter we follow M. L. Smith’s (2006; see also Hutson 2016) use of demographic (areal extent, population size, population density), internally specialized (e.g., monumental architecture, ruling class, recording system), and externally specialized (whether the settlement has particular regional functions) criteria, whereby a city is defined by a high proportion of one of these criteria and some proportion of the other two. In terms of demographics, however, we follow Scott Hutson (2016; see also Wirth 1938) in the belief that there is an important experiential threshold from town to city where, beyond a certain population size, one begins to live in a place with the potentiality of anonymity. If this anonymity exists, along with enough of the other traits of a city, we can safely call a settlement a city. As Hutson (2016) notes, though, identifying just where that threshold lies for particular settlements is difficult. We can attempt to test the probability that people could come face-to-face in the past by using techniques such as access analysis (Yant 2014) but, without a true ethnographic component to such analyses, an ‘archaeology of anonymity’ is exceedingly difficult in the lower ranges that characterize early cities.

Yet, from an emic perspective, even establishing that a settlement is a city based on a set of etic archaeological criteria does not guarantee that the people in the past viewed these same settlements as cities. While we are sure that many of our colleagues would find the emic/etic debate irrelevant (if a settlement complies with our typology it does not really matter what the ancient people thought of it), we suggest that it is an important avenue of research to explore. It is relevant to ask if the ancient Maya even conceptualized large settlements as cities. To be sure, large Classic period settlements such as Tikal, Caracol, and Calakmul would have had an impact on how people perceived them. They were surely places of great social activity, political power, and economic opportunity, among other factors. As Norman Yoffee (2015: 546) states, cities evoke awe and these Maya cities certainly would have done just that. Yet were they conceptually different from much smaller, yet politically and economically important, settlements such as Dos Pilas? Both Tikal and Dos Pilas had emblem glyphs¹ and dynastic rulers but were radically different in size. This is

¹ In Classic Maya hieroglyphic writing, emblem glyphs are often associated with particular sites or dynasties, although the place names they invoke range from historic to mythic locations. Emblem glyphs served to “identify one’s status as a ruler of a certain place” and, simultaneously, “identify someone with places that make him or her worthy of lordly rank”

where the hieroglyphic inscriptions fail us, as they tend to focus on the lineage and rank of people who lived in these places rather than the place by itself (Houston and Garrison 2015: 54–55).

As Marcello Canuto and Francisco Estrada-Belli (Chapter 4; see also Houston and Garrison 2015: 55–56; Tokovinine 2013) outline, however, there are terms in the colonial documents and Classic Maya hieroglyphic texts that may shed light on an emic view of cities among the Maya. The term *ch'een*, a word glossed as “cave,” “canyon,” or “well,” appears to refer, in particular, to settlements, possibly even cities. Yet despite these recent epigraphic advances, we cannot be certain if terms like *ch'een* actually refer to settlements as something approaching a western concept of cities or if, alternatively, they define important places of ritual regardless of their degree of urbanism. Would, for example, an obvious urban center like Classic period Chunchucmil (see Hutson 2010) have been considered a *ch'een* given its lack of a clear ritual center and carved monuments like other Maya cities? Fortunately, we can etically sidestep the issue of population size with M. L. Smith's (2006) triaxial classification where less emphasis is placed on demographics if a settlement has enough factors related to internal and external specialization. The question of whether the Maya themselves distinguished between what we may term towns and cities, or even different types of cities, however, remains difficult to answer.

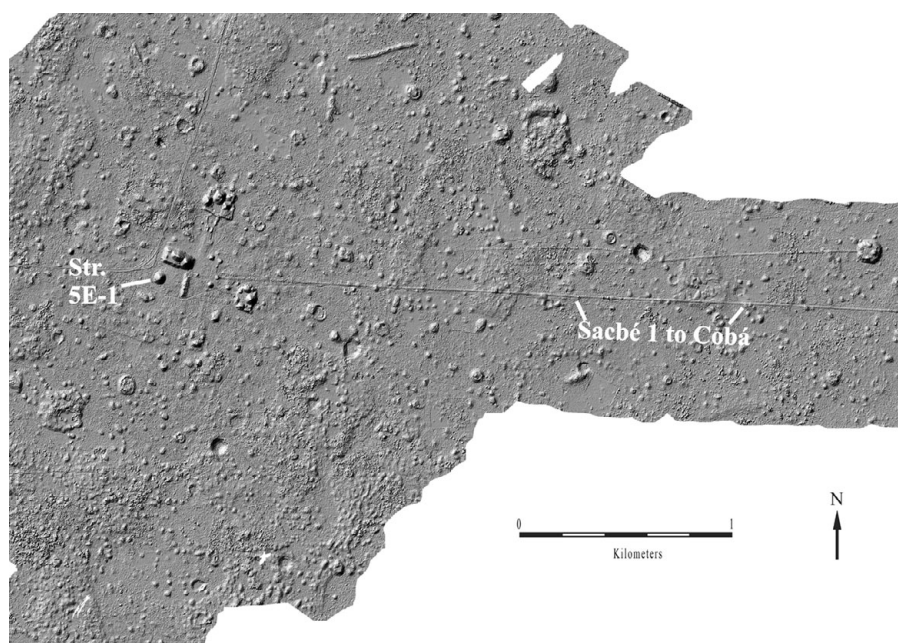
We contend that while we need to pay close attention to the transformations that engendered early Maya cities, these early cities also had much in common with the earlier towns and villages on which they were built. Some of these commonalities may explain why Sanders and Webster (1988) resisted the idea of Maya cities so fervently prior to their adoption of the ritual-regal city. When Maya communities do finally become cities, the mark of semi-sedentary place-making still served as the basis for the built environment, possibly blurring the change from village to city in ways that may be different from other parts of the ancient world.

YAXUNÁ AS A LATE PRECLASSIC CITY

Before moving on to an analysis of the early data it is prudent to evaluate if we can even consider Yaxuná a city during the Late Preclassic period. While we believe that Yaxuná was a city at this point in time, in many ways this is a

(Tokovinine 2013: 85). They do not, however, Tokovinine clarified, “necessarily index the largest spatial entity attested in the inscriptions at a given site” nor correspond to any “distinct modern spatial category.” Instead, they referenced an ideational landscape of political authority. See Tokovinine (2013) for discussion of the history of the arguments concerning Classic Maya emblem glyphs and their political and geographic significance.

problematic question to address given the parameters used to define a city discussed above. First, the density and demographic size of the community is difficult to calculate during this period. An area of about 120 ha of the site core was mapped in the 1980s and 1990s (Stanton et al. 2010). Given the thin soil development in the northern part of the Yucatan peninsula, most, if not all, domestic features that utilized stone construction are visible on the surface. A relatively small number of approximately 35 domestic groups was tested by the Selz Foundation project through excavation (Shaw 1998; Stanton et al. 2010) and about half of those yielded material dating to the Late Preclassic. From this sample a pattern was identified for Late Preclassic households. Excavations in broad platforms characterized by retention walls composed of large, roughly worked boulders almost always yielded some amount of Late Preclassic material. While large areas of Yaxuná have not been systematically ground checked, data collected from lidar mapping (Fig. 5.2) (Magnoni et al. 2016), a program of surface collection on boulder-lined platforms in the area of the site center, and a transect to the east of the site center (Hutson et al. 2012), indicate that the site is approximately 800–900 ha in total, not counting peripheral acropolis groups within three kilometers of the site core. From the known data we extrapolate that there are approximately 225 platforms that may fit the morphological criteria established for Late Preclassic domestic platforms, but given that Yaxuná had a long occupation, a lack of chronology for the majority of these platforms is a major issue. In any event, Yaxuná at any



5.2. Hillshade image of Yaxuná from the 2014 lidar survey with locations of Structure 5E-1 and the sacbé (causeway) to Cobá. Image by authors

period was not a particularly dense settlement compared to Classic period cities like Chunchucmil (Hutson 2010). Limited excavations of six of the Yaxuná platforms by Chelsea Fisher in 2015 demonstrated that they were all utilized during the Classic period, and that the Late Preclassic components were highly altered by later occupants. This general lack of *in situ* Late Preclassic deposits across the site inhibits our ability to calculate platform sizes during this period. While, generally, we are not comfortable with population estimates at archaeological sites, taking an educated guess based on the number of possible Late Preclassic residences and their relative sizes, we estimate that the population could have been somewhere between 3,000 and 4,500 people. We could envision some low level of anonymity in such a place, but we stress that our data for making such a calculation are not very reliable. Further, we have no burials from the Preclassic period, stymying any attempt to discuss population diversity through dental morphology or stable isotope analysis.

In terms of external specialization, it is clear that Yaxuná was the only settlement of its type in the region during the entire Preclassic portion of the sequence. Despite an ongoing program of systematic survey and reconnaissance by the PIPCY (Proyecto de Interacción Política del Centro de Yucatán) project in an area of over 500 km², no other large early sites have been found that date prior to the Late Classic. In fact, we know of no other sites with a monumental core as large and complex as Yaxuná throughout the region during the Late Preclassic. The data indicate that Yaxuná would have served as a regional capital of central Yucatan and would have had ritual, political, and economic specializations that other communities lacked.

Finally, in regards to the internal specialization of Yaxuná, we argue that it meets enough of the criteria mentioned by M. L. Smith (2006; cf. Childe 1950) to consider this settlement urban. In Table 5.1 we have outlined these criteria and included our reasoning as to whether or not Late Preclassic Yaxuná meets each one. Although data for some of the criteria are lacking from Yaxuná itself, given that evidence exists for these at other Late Preclassic Maya centers we believe that it is possible that they could have been present at Yaxuná but that we have not yet found evidence for them. In sum, we believe that the Yaxuná data fit M. L. Smith's (2006) definition for a city.

THE FOUNDING OF YAXUNÁ

To comprehend the Late Preclassic context of Yaxuná as a city, we must first move back in time to examine how Yaxuná was founded as a permanent place on the landscape. Data from several areas of Yaxuná as well as the cave site of Aktun Kuruxtun (Slater 2014) indicate that the Maya of central Yucatan were transitioning from a semi-sedentary to a more spatially fixed lifestyle around 1000–900 BCE, more or less on par with similar transformations in other areas

TABLE 5.1. *Presence or absence of criteria for internal specialization at Late Preclassic Yaxuná*

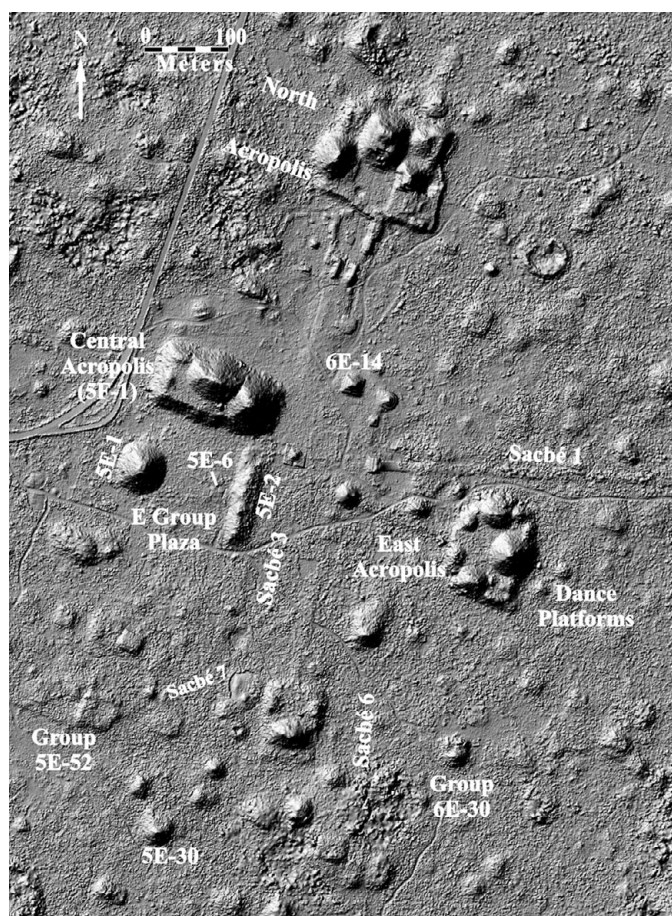
Internal Specialization	Present	Reason
Comparatively large settlement	Yes	There are no known communities near the size of Yaxuná at this time in central Yucatan
Some full-time specialization	Unknown	Workshops that may indicate full-time specialization have not been recorded at Yaxuná. The quality of craftsmanship of some Preclassic period artifacts at Maya sites, including Yaxuná, may indicate some degree of specialization, but there has been little research on the subject and little consensus concerning the significance of the data
Taxation (tribute)	Probable	During the Classic period it is clear that tribute was paid to Maya rulers. Data are sparse for the Preclassic period, but so is the type of iconographic data that demonstrate tribute being offered. Given the presence of some form of divine kinship in this period we highly suspect that some form of tribute system existed, but there is no concrete evidence for it as yet at Yaxuná
Monumental architecture	Yes	Many large monumental constructions at the site
Ruling class	Probable	The existence of a palace by the Terminal Preclassic would indicate that a ruling class was forming or had already formed by this time
Recording system	Unknown	Writing is known for some sites in the southern Maya Lowlands at this time, although we cannot read it well. It is quite possible that early sites in Yucatan employed a script, but there is no current evidence to confirm this suspicion
Exact or predictive science	Yes	Doyle (2013b) indicates that Maya E Groups were built using particular principles that required exact measuring systems. Further, the use of astronomically aligned monuments indicates that the Maya, including those at Yaxuná, employed advanced calendrical calculations based on celestial phenomena
Artistic expression	Probable	While we have little current evidence of stucco facades and masks at this time at Yaxuná, they are present at contemporaneous sites in other areas of Yucatan (e.g., Quintal 2014) and stucco masks most likely grace the unexcavated Str. 5E-1. We also know that at least some of the contemporaneous Maya of the southern lowlands painted complex murals (Saturno et al. 2005; Taube et al. 2010)
Long-distance exchange	Yes	Plentiful evidence for long-distance exchange including ceramics and greenstone
Resident crafts-makers subservient to political authority	Unlikely	While we cannot be sure if there was any form of full-time specialization at this time, excavations near the palace complex have not revealed data indicating such a situation, and we feel it is unlikely that full-time specialists were attached to the ruling elite as has been reported for the ensuing Classic period (e.g., Reents-Budet et al. 2000)

of the Maya Lowlands (e.g., Inomata et al. 2015a, b); there is no evidence of Early Preclassic occupation, and the Late Archaic extends to about 1000 BCE in this region. Pollen data from Popolá, a satellite site located 5 km north of Yaxuná, suggest that maize was being grown in the region during this early period (Zimmerman 2013). However, outside of Yaxuná we have yet to identify stone masonry dating to the early centuries of the first millennium BCE. Scattered Middle Preclassic ceramics have been found in mixed contexts with later materials at sites such as Ikil, Popolá, and X-Panil, but none of these materials shows any diagnostic traits that indicate they could be this early. While early Ek Complex ceramics have been found at Yaxuná, no such materials have yet been found at other habitation sites in the region, obfuscating our understanding of the concomitant process of ruralization during this period. Thus, it appears that Yaxuná was the only sizable site in the region during the early Middle Preclassic.

The Establishment of the E Group

Among the earliest contexts at Yaxuná are those from the E Group (Fig. 5.3).² E Groups have been the subject of close scrutiny over the past few years (Freidel et al. 2017), although earlier work correctly established them as monuments for ritual performances associated with the passage of time, specifically the solar calendar (Ruppert 1940; see also Aveni et al. 2003). Our explorations in the plaza of the Yaxuná E Group have uncovered a 3 m deep sequence of plaster floors and fill. In its final form prior to abandonment the plaza measured 75 by 105 m. While multiple floors were found in all of the excavations, the largest number were located in the direct center of the plaza where we calculate a minimum of eleven, but possibly as many as fourteen, floor surfaces (only the secure floors are numbered) (Fig. 5.4a). While five floor varieties have been found in the plaza investigations, only the earliest floors (10 and 11) were made of tamped earth, which is usually a sign of great antiquity in the Maya Lowlands (Brown 2003). We do not have any radiometric dates associated with the surface of the final two floors, but we do have relevant dates to help us situate the sequence. The first comes from the fill directly below Floor 5 in the center of the plaza (780–539 BCE; all ranges are presented in two standard deviation format). The most important of these dates, however, given its secure context on Floor 7, is a carbon sample (813–433 BCE) we

² At Yaxuná there are four contexts where we have recovered sealed Middle Preclassic deposits: the E Group, below the Dance Platforms, the 6E-30 Group, and the 5E-19 Group. The 5E-19 Group has a substructure of Middle Preclassic date, but little of this substructure was exposed during its exploration and it likely dates towards the end of the Middle Preclassic (see Stanton and Ardren 2005; Stanton et al. 2010). Given our lack of understanding of this structure, we will not consider it here.



5.3. Hillshade image of central Yaxuná from the 2014 lidar survey showing location of structures mentioned in text. Image by authors

believe dates the construction of Floor 6, a durable 20 cm thick level composed of *sascab* (a concrete-like substance produced from mined limestone). A second date for Floor 6 comes from the fill composing a subsurface of the floor near the base of 5E-2 (829–558 BCE); given its place in the fill, this sample may date the burning of the lime used to prepare the floor. Floor 7, the surface associated with the early monumental construction of Structures 5E-2 and 5E-6 (Fig. 5.3), was composed of a mixture of soil and *sascab*. Two dates from the fill under Floor 7 come from less secure contexts than the Floor 6 samples: a large charcoal fragment on bedrock near the base of Str. 5E-2 (979–824 BCE), and from the fill directly under the surface 6 m west of 5E-2 (927–807 BCE). The bedrock area between Structures 5E-2 and 5E-6 where these samples were recovered was first covered by construction when Str. 5E-2 was erected (first associated with Floor 7) and does not have the antiquity of the central part of the plaza where evidence of Floors 10 and 11 was found.

Regardless, while the possibility of old carbon in these other contexts is an issue, all of the dates are stratigraphically congruent and suggest great antiquity (potentially in the early Middle Preclassic) for the founding of the Yaxuná E Group, in line with the presence of tamped earth floors in the center and western portions of the plaza and Laapal Complex pottery.

Although we have not excavated in the area of the western radial structure, investigations have demonstrated that the earliest phase of Str. 5E-6 was a rise in bedrock standing just over one meter above the surface of Floor 11; a series of subsequent range structures were erected over this modified bedrock in later periods. Both tamped earth floors terminate upon the bedrock rise indicating that it represents the early eastern boundary of the plaza. On top of the bedrock outcrop were four intentionally cut holes, sealed with limestone caps, revealing what we believe to be an underlying cave. In the central hole, corresponding to the centerline axis of the plaza, was a complete water jar (Achiotes Unslipped). The two tamped earth floors were also discovered near the base of Str. 5E-1, the western pyramid, indicating that it covered a substantial area spanning about 65 m east–west. We suspect that if these floors indeed represent an early E Group similar to those reported from the southern lowlands (e.g., Canuto and Estrada-Belli, [Chapter 4](#); Inomata et al. [2015b](#); Laporte and Fialko [1995](#)), there will be a substructure beneath Str. 5E-1 to coincide with the early version of the range structure (5E-2) represented by an outcrop of bedrock.

As Takeshi Inomata and his colleagues ([2015a, b](#); see also Stanton [2017](#); Stanton and Collins [2017](#)) have outlined for Ceibal, the key to understanding these early E Groups is their role in the process of spatially fixing regional populations transitioning from a semi-sedentary Late Archaic lifestyle to a less mobile way of life, which characterized later Maya populations fully committed to using maize as a staple crop. Around 1000–800 BCE the early E Group form spread quickly through certain areas of Eastern Mesoamerica, most prominently in the Maya Lowlands; the Yaxuná example was a rare outlier in the north, and possibly a product of increasing participation in larger political and economic networks. Research indicates that these early E Groups were subjected to centering rituals consisting, at least in part, of the marking of the center of the E Group (and site) with a quadripartite cross (*kan* cross) often carved into bedrock (e.g., Chase [1983](#); Estrada-Belli [2006, 2011](#); Inomata et al. [2015a, b](#)). As has been amply demonstrated, quadripartite symbolism is related to concepts of centering and the cardinal directions as well as iconography concerning the Maize God. During the Classic period, the Maize God, or rulers in the guise of the Maize God, are often depicted in the center of quadripartite symbols (Taube [1996b](#)). The cross symbol marks the place of emergence of the Maize God on a Classic period offering plate (Freidel et al. [1993](#): fig. 6:20b) and also appears on a World Tree sprouting

maize on the Tablet of the Foliated Cross at Palenque (Freidel et al. 1993: fig. 6:21). In short, the cross symbols below the centers of the plaza of early E Groups mark them as the literal center of the universe as well as link them to an emerging iconography concerning the Maize God.

As noted earlier, one of the hieroglyphs that appears to denote communities of importance, perhaps cities, is the word *ch'een*, which invoked caves that, as portals into the earth, carried an association with places of emergence already by the Preclassic period, much like the *kan* cross or comparable quadripartite symbols like the quatrefoil (Guernsey 2010a). The placing of these cross symbols in early E Groups may have been a way of marking these early sites as places of particular significance. We do not believe that any of these early sites was a city by western standards during the early portion of the Middle Preclassic: the low demographics would not have allowed for anonymity for those who resided permanently at the site. But that might not have mattered much to the Maya. They were important places on the landscape, many of which would transform into communities we can call cities from a modern perspective.

While some E Groups appear to have been built on Late Archaic sites (Estrada-Belli 2011), indicating some continuity between possible Late Archaic³ and Preclassic period place-making, the break in these place-making behaviors is evident in the types of practices that quickly emerged during the first centuries of the Middle Preclassic. These practices include stone architecture aligned to commemorate and/or calculate the solar calendar, the intentional cleansing of the material remains of previous activity, the ritual deposition of material culture, and the physical marking of the center of sites (albeit hidden from view beneath the floors of plazas) on the landscape. The use of the *kan* cross symbol and the observance of the solar passage indicates that these places were designed to tie into an emerging Maize God cult popularized in broader Mesoamerica at this time, which also reflected a shift in subsistence strategies (see Taube 1996b).

The E Group form was quickly adopted across certain areas of the Maya Lowlands, possibly following existing Late Archaic social networks in which we assume the people of Yaxuná participated. The crux of Inomata and colleagues' (2015a, b) argument is that places such as Ceibal were established by Maya transitioning to a new lifestyle based on maize as a staple crop. The regional populations were still somewhat mobile at 1000 BCE (cf. Rosenswig 2011; Rosenswig et al. 2014) and, as in central Yucatan, are difficult to identify given their general lack of material remains. Yet the E Groups represent fixed

³ We must keep in mind that while we do not have much evidence for Late Archaic peoples in the Maya Lowlands (see Lohse 2010), more mobile populations also use particular places on the landscape for a range of social activities and to negotiate concepts of identity (e.g., Taçon 1989, 1994, 1999).

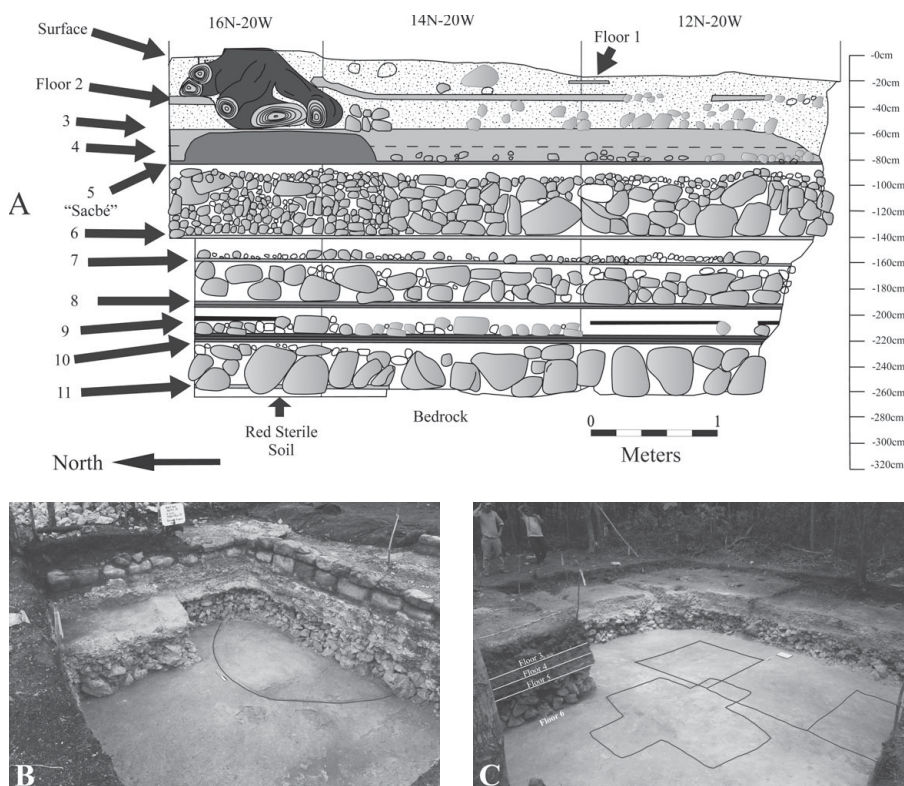
spaces that allowed the early Maya to elaborate upon the first substantial built environments – albeit using the existing topography that was likely important to earlier mobile populations – that played important roles in transitioning to a more sedentary lifestyle. The early E Groups functioned as regional gathering places, possibly run by newly emerging elites who specialized in ritual practices, much like figures depicted in contemporaneous Olmec-style art (e.g., Reilly 1989). The E Group as a plaza complex began to fix the identity of fairly mobile peoples around an increasingly built environment characterized by a wide variety of ritual, social, and economic activity; the widespread extent of the E Group form likely indicates that communities were closely tied by similar economic and ritual practices and were in regular contact with each other (see Canuto and Estrada-Belli, Chapter 4). Much like similar gathering places discussed by archaeologists in other parts of the world (e.g., Sassaman 2004), the occasional assembly of larger groups of people than lived together under normal circumstances would have provided the opportunity for the negotiation of a whole host of social issues (e.g., alliances, use of regional resources) as well as provided more opportunities for exchange (e.g., marriage partners, goods). In short, these early E Group communities would have represented in many ways a new way of life for the people who participated in them. The large plaza spaces would have facilitated the forging of new identities for distinct groups living together through the participation in the physical construction of the spaces, ritual practices, and other social and economic activities conducted in or near them (cf., Adler and Wilshusen 1990; Pluckhahn 2010; Stanish 2004: 17–18). The large plaza would have accommodated many more people than were living at Yaxuná at this time, likely indicating that people from a large area came to the site periodically. This new way of life would quickly gain traction across the Maya Lowlands, but would be rapidly transformed as economic, social, and political life was renegotiated, eventually resulting in the emergence of substantial inequality by the Late Preclassic. At the beginning of the Middle Preclassic, E Groups were very much communal. Yet while the built environment and the social relationships at places like Yaxuná would be radically transformed as communities transitioned to urban places characterized by very marked social inequality, as we will illustrate, they still retained some fundamental characteristics of these early fixed gathering places.

The Enlargement of the E Group

About halfway through the stratigraphy of the central portion of the plaza we encountered a very well preserved and durable *sascab* floor (Floor 6) with a series of incised lines, including a circle (Fig. 5.4b). One set of lines, consisting of squares with nearly equal sides at 170 cm and placed at spaced intervals also

of 170 cm spanning east–west, appear to be related to the construction of a later *sacbé* (a causeway or procession way) built right on top of them (Floor 5) (Fig. 5.4a, c). There was also a large *kan* cross approximately 2 m in diameter (Fig. 5.4c). Given the placement of cross features – specifically those cut into bedrock in the direct center of E Group plazas when first constructed in the Middle Preclassic at other sites (see Chase 1983; Estrada-Belli 2006, 2011; Inomata et al. 2015a, b) – we believed that the Maya at Yaxuná were re-marking the old center. While the labor-intensive Floor 6 provided the earliest clear evidence of shared symbolic exchange, it also coincided with the plaza’s final size as it actually reached Str. 5E-2 (as did Floor 7).

Continued excavations of a series of low wall lines that were heavily disturbed by later stone robbing just west of Str. 5E-2 demonstrated that Floors 7–11 are associated with a substructure of Str. 5E-6, a two-tiered platform standing at a full height of two meters built upon Floor 7 (Fig. 5.4c). The phase of 5E-6 associated with Floor 7 was contemporaneous



5.4. Excavations in the E Group Plaza of Yaxuná: (a) Stratigraphic profile of east wall of Operation 152-2; (b) View of excavations on the plaza’s central east–west axis showing an incised circle (highlighted in black) on Floor 6, just west of Str. 5E-6; (c) View of Operation 152-2 showing incised squares and cross (highlighted in black) on Floor 6, marking the E Group’s center; floor levels labeled in white. Photos and drawing by authors

with the earliest phase of Str. 5E-2. Beneath this monumental phase, a large outcrop of bedrock, standing just over one meter in height above Floor 11, was revealed. Str. 5E-6's earliest phase as a bedrock outcrop was undoubtedly as the early eastern boundary of the plaza. During this early period, rather than spanning 80 m east–west, the width of the early plaza could not have stretched beyond 65 m. Evidence also suggests that the plaza's early length was truncated as well, though further investigation is required to ascertain by how much. Yet, as mentioned above, the establishment of Floor 7 coincided with extensive modifications to Str. 5E-6 and the monumental constitution of Str. 5E-2 and Str. 5E-1. If we are correct in this interpretation, then there was a need for the participating populace in the regional community to create more space for public gathering. Such a radical and monumental transformation of the plaza indicates that the ritual, social, and economic draw of Yaxuná was successful enough to warrant the creation of a much larger public space towards the end of the Middle Preclassic period. We also see, at this time, the first evidence of long-distance trade, a polished fragment of a magnetite mirror found in an intrusive cache on Floor 7. Other materials, such as greenstone and obsidian, are not evidenced until the onset of the Late Preclassic and construction of Floor 5. While Yaxuná was incorporating similar ideas concerning cosmology, religious symbolism, and architectural practice evidenced in the form of early E Groups found throughout eastern Mesoamerica during the Middle Preclassic (Chiapas, Guatemala, and the Pacific Coast), it is less clear that Yaxuná's inhabitants shared the impetus or ability to acquire and ritually deposit comparable prestige goods until the Late Preclassic.

Interestingly, the incised cross present on Floor 6 was likely part of a re-centering event. Investigations revealed that the likely original center of the plaza was positioned over a natural aperture in bedrock, one that was sealed with a large limestone cap. The aperture was repeatedly marked on subsequent floors evidenced in the area with intentional cuts into floors that were sealed with capstones and mortar (Floors 11, 10, and 8), a circular arrangement of architectural stones over circular cuts into the floors (Floors 7 and 6), and wider intrusion episodes refilled with dirt and piled fill stones (Floors 4, 3, and 2). Because of the continual activity on later floor episodes, we believe that this space, 4 m southwest of the cross, was the original center of the plaza. Subsequent re-centering events indicate that maintaining the geomancy of cosmic order was critical to the idea of place at Yaxuná, a topic to which we will return.

Another important element of early Yaxuná, but one that is a bit more difficult to date, is the 6E-30 Group (Fig. 5.3). This group is the largest residential platform at the site and its earliest construction dates to the Middle Preclassic. We are unable to precisely date the founding of the group, but at some point during the Middle Preclassic period it appears as if an

assembly of emerging elites constructed a much larger residence and conspicuously consumed a good deal of wealth during the dedication ceremonies. Demonstrating this is a large deposit of ceramics, chert, shell, and malachite, which was deposited on bedrock prior to initial construction. While these elites may not have been “rulers” of the community in the sense of later kings, it is important to stress that, as in other areas of Mesoamerica (see Clark and Blake 1994), some marked evidence of social stratification occurred fairly early in the history of Yaxuná. Further, the elites living at this group used a causeway to connect themselves to the overall sacred site plan.

Expanding Performance

Throughout the Middle Preclassic period, the landscape at Yaxuná was dominated by the E Group, a singular public space that we generally interpret as a gathering place, but more specifically conceive as a locus for proto-ritual/fairs interweaving significant social, economic, and ritual activities for the people participating in regional networks of interaction. For many centuries it remained the only significant ‘tool’ of the built environment that functioned to attract increasingly sedentary Maya into its sphere of influence. Around the time of the transition to the Late Preclassic this changed, however. Two dance platforms with internal corridors were constructed at the time of this transition well to the east of the E Group, but along its central line of sight (Fig. 5.3).

Charles Suhler’s (1996) excavations of both platforms revealed pure Middle Preclassic deposits between the floors and bedrock. Two burned wood samples recovered from below the well-preserved floor level of one dance structure, however, yielded ranges of 520–380 BCE and 382–186 BCE (Stanton 2017). A third sample was recovered on the floor of one of the corridors but sealed by roof collapse. The sample yielded a range of 390–200 BCE and could be from the original roof beams or from a burning event associated with the abandonment of the platform. A dedicatory cache, which contained early Late Preclassic vessels, was located in the platform. All of these data point to a transitional or early Late Preclassic date for the construction of the platform. The East Acropolis, however, does not show any evidence of construction until the Late Preclassic was well underway, indicating that the two dance platforms were the primary focus for public ritual outside of the E Group around 300–200 BCE.

Both platforms have internal corridors in the form of the *kan* cross, the symbol associated with the place of resurrection of the Maize God (Freidel et al. 1993; Stanton and Freidel 2005), whose shape was also conflated with the quatrefoil portal that linked the levels of the cosmos (Guernsey 2010a). As we have seen, *kan* crosses marked the centers of early E Groups, and at Yaxuná the visible cross might have served a theatrical function. The centerline of Str.

5E-2 of the E Group lines up directly with the main temple of the East Acropolis, which we have argued elsewhere may cover a third dance platform; this would have resulted in a triad of platforms that mirrored the mythical three-stone hearth place in Maya cosmology (Stanton and Freidel 2005) and, equally importantly, effectively linked this new eastern portion of the Yaxuná monumental zone to the concepts of centering and Maize God rituals. While the edges of the platform were rounded, suggesting that the platforms could have been effigy turtles like the much later Terminal Classic platform reported by Peter Schmidt at nearby Chichén Itzá that takes the form of a turtle (Osorio León 2004), they were not well preserved enough to clearly identify a shape.⁴ Nevertheless, publicly accessible rituals likely concerning the passage of the sun and the resurrection of the Maize God continued to be the focus of the built environment at Yaxuná around the third century BCE. Yet the spaces for celebrating such rituals, at this time, were expanded beyond the E Group to include at least two highly visible performance spaces located in an open area to the east.

By the beginnings of the Late Preclassic period, Yaxuná still had a communal feel about its built environment, despite evidence from the 6E-30 Group indicating that some level of inequality was present. Yet, as the built environment was expanded and population levels increased, there was still a focus on inclusion. For this period, there are no known elite tombs within the civic space, and the performance spaces are characterized by extensive visibility. As we shall see, however, this would soon change as the Late Preclassic came into full fruition and Yaxuná reached the minimal demographic levels to be considered a city.

THE TRANSITION TO LATE PRECLASSIC URBANISM

At some point during the Late Preclassic period, things changed drastically at Yaxuná. The first and foremost of these changes was demographic. Excavations and surface collections have revealed that there was a much higher number of people living at the site during the Late Preclassic than in earlier times. While we have already discussed our low level of comfort in calculating population numbers, the fact remains that Late Preclassic materials are found at practically all of the boulder-lined platforms that have been investigated. Yet while Yaxuná finally met the demographic criteria for a city at this time, there were also other critical social transformations that occurred during this period.

⁴ Again, we must remember the role of the turtle and the three-stone hearth in rituals associated with the resurrection of the Maize God in Maya thought. The *kan* cross marks the place on the back of the turtle from which the Maize God emerges, as in the case of the Classic period plate illustrated by Freidel et al. (1993: fig. 6:20b).

During the Late Preclassic the E Group plaza was raised nearly to its present height. The construction of Floor 5, the first raising of the plaza since Floor 6, was the largest construction episode by far in the E Group plaza. Further, the fill was carefully prepared to meet specific size standards and carefully placed; this contrasts with practically all known fill contexts across Yaxuná. On top of Floor 5, a raised stucco walkway was constructed across the centerline of the plaza bridging the 60 m distance between Str. 5E-1 and a low platform constructed over the old Middle Preclassic range structure now buried by the plaza. This causeway reinforced the line of sight from the E Group to the dance platforms critical to the early geomantic plan of Yaxuná.

Despite this continuity in civic planning, however, major changes to the site layout occurred as well at this time. First, the dance platforms themselves were abandoned. In their place, at the eastern end of the E Group axis, a triadic acropolis (the East Acropolis) was constructed. Excavations in the plaza of the acropolis indicate that its construction was initiated well after the Late Preclassic was underway. The line of sight of the centerline of the E Group passes directly through the middle of the principal structure of the East Acropolis indicating that this new architectural feature was meant to anchor the eastern side of this axis.

Construction at the North Acropolis and Sacbé 3, the causeway leading south from this architectural group, was also initiated at this time. Stanton and Freidel (2005) argue that the civic plan of Yaxuná was modified to add a north-south axis and create a cruciform civic arrangement. Sacbé 3 crosses the E Group axis at a perpendicular angle and continues towards the 5E-30 Group, a miniature Preclassic triadic acropolis anchoring the southern axis at the end of Sacbé 6. In 2015 we discovered another causeway leading from Str. 4F-4, west of the site center, to the E Group. This causeway completes the cruciform pattern with the E Group situated very close to the center.

Stanton (2005) has speculated that the construction of these groups, and others,⁵ connected by causeways to the site center, represented the development of multiple elite factions during the Late Preclassic. As populations increased at the site, important families built their temple/residence groups in critical areas of the site's sacred geography, much in the way that Christopher Pool and Michael Loughlin (Chapter 3) argue for Tres Zapotes. While the complete range of functions of Late Preclassic triadic groups across the lowlands is still debated (Houston and Garrison 2015), this pattern at Yaxuná suggests that some form of power sharing among important factions existed and that some level of consensus was reached on how each of the faction's architectural groups were inserted into the geomantic plan.

⁵ The 5E-19 Group acropolis would be another example, as well as the Northeast and Tzacuil acropolis groups located further from the site center.

The geomantic plan still retained the communal E Group form as its center, but negotiations over how to use sacred space led the Maya of Yaxuná to replicate the same cross pattern at a monumental scale. Yet it is clear that during the Late Preclassic we see a much more complex sociopolitical landscape, one marked by more restrictive architecture as in the case of the high triadic group formed around a much smaller private plaza. The visual restriction of public space occurs in other areas outside of the Maya region as well (e.g., Joyce 2000, [Chapter 2](#)), and appears to be related to the proliferation of inequality during the rise of state-like societies.

Data from other sites across the Maya Lowlands indicate that the institution of divine kingship was crystalizing at this time, although we believe it would be a mistake to view the kings of the Late Preclassic as equivalent to those of the Classic period.⁶ At San Bartolo, Late Preclassic images of divine kings are clear (Taube et al. 2010), and echoed by the Late Preclassic petroglyph at Loltún Cave in Yucatan, much closer to Yaxuná, which clearly shows a divine ruler (Andrews 1981). Late Preclassic and Protoclassic tombs in the southern lowlands also point to the development of this institution prior to the beginning of the Classic period (Coe 1990; Saturno 2006). The recent discovery of a Late Preclassic throne at Xaman Susula in Yucatan provides further clues concerning the early appearance of the trappings of kingship (Peniche 2012). At Yaxuná we do not as yet have material or iconographic data to prove the existence of an early form of divine kingship but, given the changes to the monumental core during the Late Preclassic period, combined with the advances in our understanding of this institution at contemporaneous sites, we believe that its existence during the Late Preclassic at Yaxuná is quite probable.

TERMINAL PRECLASSIC TRANSFORMATIONS

During the last centuries of the Preclassic period the social order began to fracture at Yaxuná. Several of the large acropolis groups were abandoned. For example, the East Acropolis shows no evidence of occupation into the Early Classic. Limited excavations at the massive Central Acropolis, bordering the north side of the E Group plaza, indicate that it was also abandoned by the beginning of the Classic period. Several architectural groups including the E Group and the 5E-30 Group were also abandoned at some point during the Terminal Preclassic (Stanton et al. 2010). By the time the Early Classic began, the North Acropolis was the only monumental group that continued to be modified and used. Evidence suggests that demographic levels were in decline during the time of these abandonments. While the possibility exists

⁶ For discussion of divine kingship, and its expression epigraphically and iconographically in the Maya region, see Freidel (2008).

that some catastrophic event occurred to cause these transformations at the site, there are other areas – the Yalahau region of northern Quintana Roo (Glover 2006) and the area around Izamal (Burgos et al. 2003) – that evidence large population increases at this same time, which suggests that migration to more economically and politically important areas may have been a factor in the exodus of many people from Yaxuná. Likewise, the Izamal area experienced one of the largest urban developments ever seen in Prehispanic Yucatan during this same era.

All this is not to say, however, that the Yaxuná center was not further elaborated during this period of decline. We will discuss two of the most important constructions here. The first of these was the palace at the site. The 5E-52 Group (Fig. 5.3) was placed to the south of the E Group plaza and physically connected to the southern segment of Sacbé 3 by Sacbé 7, thereby embedding it into the sacred geography (Stanton and Freidel 2005). Two carbon samples (138–381 CE, 57–232 CE) from the burning of the first construction episode of the palace demonstrate that it was abandoned during the first centuries CE. The presence of a palace structure at this time indicates that the institution of kingship was becoming firmly established at Yaxuná; this corresponds to a period when the first known dynasties were founded in the southern lowlands.

The second structure of interest is 6E-14, a rather modest radial, or cruciform, structure constructed in the place where the causeways forming the Late Preclassic cruciform plan come together, just southeast of the Central Acropolis (Fig. 5.3). Excavations on Str. 6E-14 by the Selz Foundation project did not reach bedrock (Stanton et al. 2010), but these excavations and those conducted by a later Instituto Nacional de Antropología e Historia (INAH) project, directed by Lourdes Toscano, revealed materials dating to the Terminal Preclassic in the fill. If the Terminal Preclassic date for the initial construction is correct, the exact center of the cruciform site plan was memorialized by the construction of a cruciform structure whose form took that of the cross originally used to center the E Group. Radial structures are, in fact, architectural embodiments of the *kan* cross, and reified the cardinal directions of the Maya cosmos in stone from the Late Preclassic through the Classic period (Coggins 1980; Guernsey 2010a;Looper 2004). The placement of such a structure at Terminal Preclassic Yaxuná demonstrates remarkable continuity with ritual practices concerned with the centering of sacred geography dating back to the early Middle Preclassic period. Importantly, this structure was constructed in an open plaza and rituals conducted during this period would have been visible to a great multitude of people. While fairly modest in its scale compared to other civic architecture found at Yaxuná, Str. 6E-14 is extremely significant. Despite passing through a period of urban development that witnessed the first real tastes of the marked inequality that would typify the

Classic period, Yaxuná essentially retained its original function. During the Middle Preclassic period, Yaxuná was a place that centered people, their economies, their regional social lives, and their identities through the practice and observance of rituals related to the solar calendar and agricultural cycle. During the Late and Terminal Preclassic periods Yaxuná did the same thing, only more people were involved, inequality had increased sharply, governance and possibly the economy had become more complex, and people were fully sedentary. Put simply, the Preclassic Maya urban experience at Yaxuná was profoundly shaped by early Middle Preclassic ‘centralizing’ strategies.

CONCLUDING THOUGHTS

Sanders and Webster’s (1988; cf. Fox 1977) characterization of large Maya settlements as ritual-regal centers stems largely from the fact that these places were characterized by built environments designed for ritual theater. While kin relations, the use or threat of violence, and a variety of other socio-economic relationships also must have been important factors, the performances that constituted this pageantry were the primary glue that held Maya sociopolitical relations together, binding the people to places and the actors conducting the performances through ritual practice (Demarest 1992). In this sense, Maya centers were not unlike other early Mesoamerican cities such as Monte Albán (Joyce, Chapter 2) or Teotihuacan (Sugiyama, Chapter 8). As we have demonstrated, this manner of ‘centralizing’ populations can be traced back to around 1000 BCE. At this early date, ritual specialists began to create fixed performance spaces that would bond relatively mobile populations, transitioning to a maize-based subsistence system, to places through agricultural rituals and the celebration of the passage of time. Some relatively low levels of social inequality undoubtedly existed at this time, but it is likely that the members of the regional community participating in these performances did so of their own volition. Further, such participants viewed the standardized built spaces as community gathering loci for a whole host of social and economic activities that extended beyond ritual events and likely included the airing of disputes, negotiations of how resources were to be used, and exchange of marriage partners. While these emerging centers brought people together for ritual purposes on calendrically significant days, the gatherings also engendered the possibility of increased social and economic opportunities through face-to-face contact between people who participated in the regional community. In fact, if ritual dates did not overlap with those of other competing centers, members of various communities would have been able to participate in gatherings at more than one place, thereby engendering a complex web of overlapping social networks. This possibility might help to explain the profound similarity of Preclassic period (*Mamom* and later) ceramics

throughout the Maya Lowlands as well as the extensive range of the E Group form (for discussion also see Canuto and Estrada-Belli, [Chapter 4](#)). Thus, while the E Group was a dynamic architectural form, employed in increasingly stratified contexts over time, we view its early manifestation as a locus for some sort of communal, proto-ritual fair.

Returning to the question of community demographics, surely massive Classic period settlements such as Calakmul, Caracol, Cobá, and Tikal were cities, even by our academic standards. Yet, despite possibly having more political or economic clout and much larger populations that impacted the social experience of a dwelling populace, were they conceptually different than much smaller settlements such as Dos Pilas (cf. Demarest 2006: 138), Piedras Negras, Yaxuná, or even more minor settlements whose lack of any substantial population might not fit our understanding of a city? In all of these places, by the Classic period, ritual suzerains in the form of divine kings provided the theater necessary for “centralizing” – or perhaps, more aptly, “centering” – populations. Further, inequality was marked and formal markets likely existed at these communities by the Classic period. In theory, each of these places was its own important center of the universe regardless of how many people actually lived there.

In much the same way, during the Middle Preclassic period, centers drew people for ritual, economic, and social reasons. For these reasons, we can at least suggest that the processes of urbanization had begun in earnest by the beginning of the Middle Preclassic. But we are also left with questions. Was the experience of urbanism at Late Preclassic Yaxuná marked by some level of anonymity? Although we believe so, this is a difficult question to answer. To the ancient peoples who would have experienced Yaxuná as the largest settlement by far in the Preclassic landscape of central Yucatan, perhaps it did not matter. But to us it should. There is still much we do not understand about Preclassic Yaxuná and its development towards some form of city life. But we believe that current data indicate that the gradual process of urbanization at Yaxuná included elaborations of Middle Preclassic behaviors rather than their replacement.

ACKNOWLEDGMENTS

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CHAPTER SIX

THE CITY OVER THE CITY

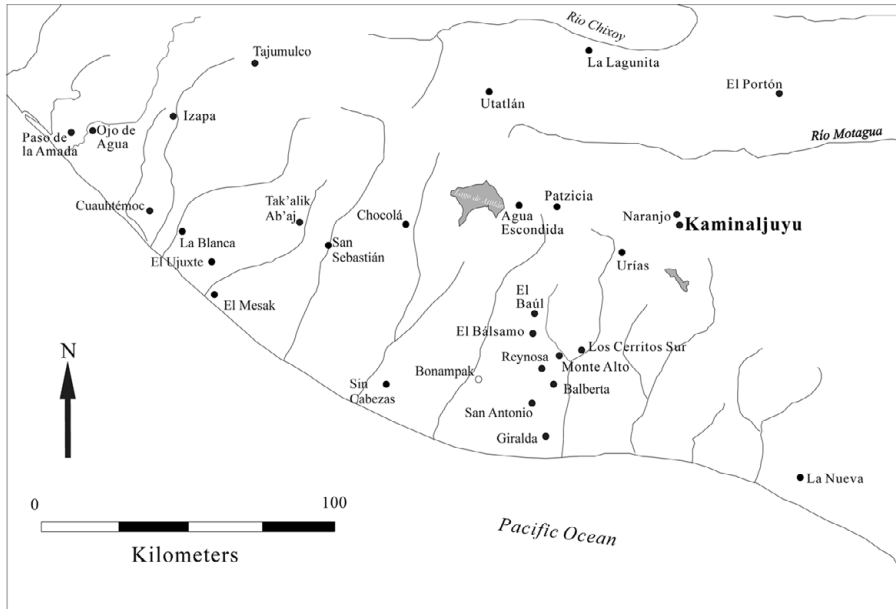
Kaminaljuyu and Urbanism

Bárbara Arroyo

THE HISTORY OF URBANISM IN THE VALLEY OF GUATEMALA STRETCHES over nearly 3,000 years, beginning soon after 1000 BCE and continuing until 900 CE. Kaminaljuyu (Fig. 6.1) was one of the largest cities in the Maya Highlands in the Classic period, but its apogee was in the Late and Terminal Preclassic periods (ca. 400 BCE–300 CE), when it was the largest of a network of early city-states throughout the highlands and along the Pacific Coast. As with other cases discussed in this volume, the Late Preclassic climax at Kaminaljuyu had a long developmental history, with antecedents in the Valley of Guatemala that extend back to the early Middle Preclassic period.

Kaminaljuyu has been largely destroyed by modern Guatemala City and this damage has limited our overall understanding of the ancient city's origins and development. However, important research carried out by the Carnegie Institution (Kidder et al. 1946; Shook and Kidder 1952) established a solid foundation for study of the site and still provides vital information. The regional Pennsylvania State University project, directed by William T. Sanders and Joseph Michels (1969), carried out an ambitious program of survey, excavation, and ethnoarchaeological investigation before the worst damage to the ancient settlement was inflicted by modern urbanization.

Subsequent field research has been done largely as rescue projects, designed to mitigate damage to the site by the expansion of Guatemala's modern urban population (e.g., Arroyo 2013; Popenoe de Hatch 1997). These recent studies, along with a number of synthetic reviews, have contributed to a better



6. 1. Map of Guatemalan Highlands and Pacific Coast showing sites mentioned in text. Map by Michael Love

understanding of the site's history (Arroyo 2020; Arroyo and Henderson 2020; Henderson and Arroyo 2014; Love 2011a, 2016a).

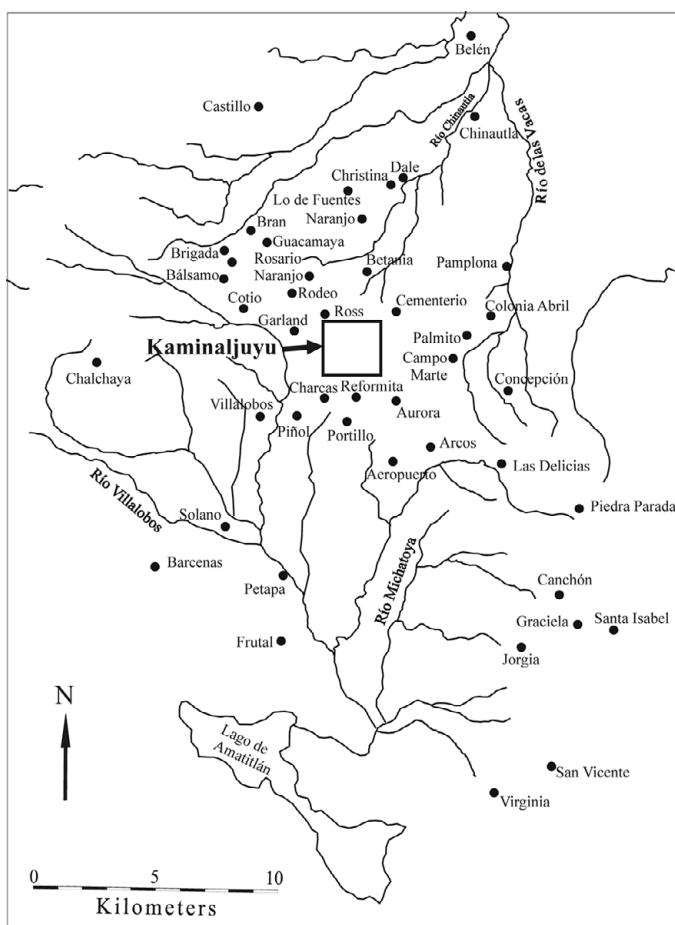
This chapter focuses on the development of urbanism at Kaminaljuyu and in the Valley of Guatemala from the Middle Preclassic through the Terminal Preclassic period, ca. 1000 BCE–200 CE. I will address several issues that contributed to the development of early urban centers in this region. These include economic factors, such as Kaminaljuyu's location close to outcrops of obsidian, as well as its location at the intersection of major trade corridors to the north and south. I will also highlight the natural and symbolic landscapes that shaped the form of the earliest urban centers. Additionally, I will consider the role of water and water management as stimuli to the process of urbanization. To support that argument, I will review data related to water management and incorporate new information from recent excavations and rescue programs.

ANTECEDENTS OF URBANISM AT KAMINALJUYU

The term “urbanism” refers to a mode of human group life with large, and often dense, population. One cannot speak of a universal model of urbanism because each city has its own characteristics and its own history, with social and technological developments that impact its evolution, as shown in the chapters in this volume. Cities also depend upon sustaining zones and are linked to the development of political units that include hinterlands from which they draw large amounts of resources (Cowgill 2004; Love 2011a; M. L. Smith 2003; Yoffee 2005, 2009).

The archaeology of the central Maya Highlands of Guatemala has not been studied as extensively as other regions of Mesoamerica and the views that we have of early urbanism are now fragmentary. Unfortunately, most of the Valley of Guatemala is now an expansive modern urban complex, so much so that the opportunity to study hinterlands beyond the urban core may now be lost. We are fortunate to have survey data that provide some information on settlement locations and dates (Murdy 1984; Shook 1952), but there are few detailed studies of hinterland communities during the Preclassic period. Those that we do have (e.g., de León and Valdés 2002) were salvage projects of limited scope.

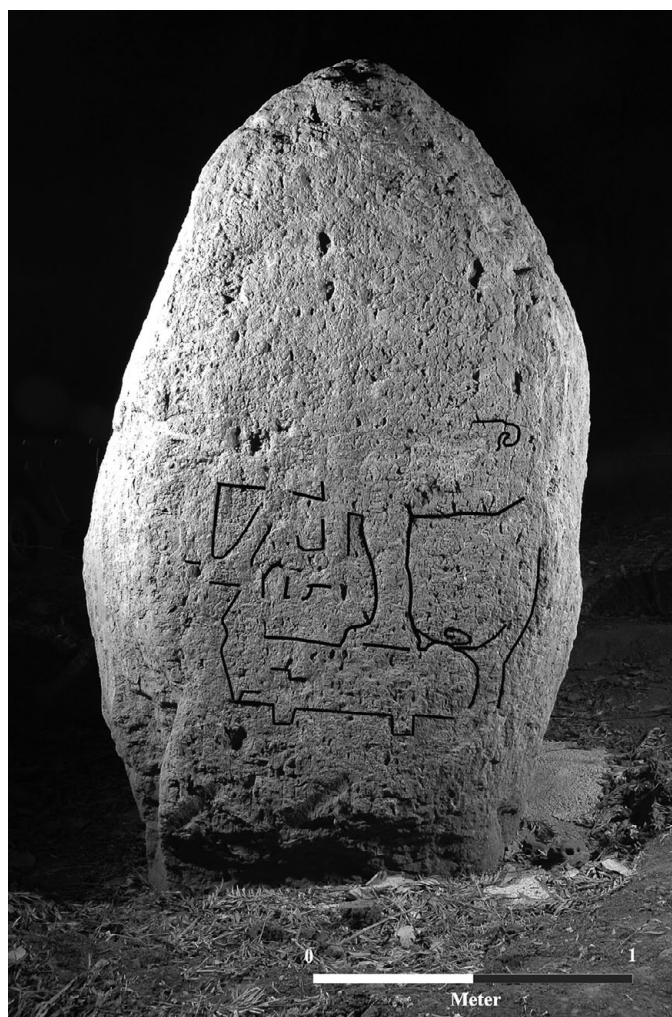
In a manner similar to the other case studies in this volume, we can see the beginnings of urbanism in the Valley of Guatemala during the Charcas phase (ca. 750–350 BCE) of the Middle Preclassic period. The largest center of that time was Naranjo, located only 3 km from Kaminaljuyu (Fig. 6.2). The ceremonial center that is now identified as the Naranjo site was, in fact, part



6.2. Location of Kaminaljuyu and other sites in the Valley of Guatemala. Rectangle indicates area mapped by the Carnegie Institution. Map by Michael Love

of an extended settlement system that belonged to a large regional center. By 750 BCE, the inhabitants of Naranjo had leveled and filled a large plaza and erected at least four rows of stone monuments in the site core, which was built at the base of Cerro Naranjo, a hill that served as a geographical marker in the center of the Valley of Guatemala (Arroyo 2010). The presence of a lagoon and fresh water springs also may have been key factors in determining the location of this early ritual center.

The lack of a large domestic sector in association with these works at Naranjo may reflect processes similar to those described for the Maya Lowlands by Marcello Canuto and Francisco Estrada-Belli (Chapter 4) and Travis Stanton and Ryan Collins (Chapter 5), where the construction of sacred spaces preceded urbanization. However, one sculpture at Naranjo, Monument 27 (Fig. 6.3),



6.3. Naranjo Monument 27, with remaining carved design highlighted in black. Legs of figure standing in profile on elevated base visible. Photo by author

suggests that some form of centralized authority played a key role in the construction and control of Naranjo. The front of Monument 27 is severely eroded, but shows the vestiges of a standing individual, while the side displays a glyph-like band (Arroyo 2010: fig. 5.15).

At the time of Naranjo's heyday, neighboring Kaminaljuyu had a small population concentrated around its own water source, Lake Miraflores. As with Naranjo, the presence of a large body of water was probably a key factor for settlement in this locality, for both functional and symbolic reasons. We can presume that the people from Naranjo were closely linked to the early occupants of Kaminaljuyu, as indicated by similar ceramic styles and building technologies.

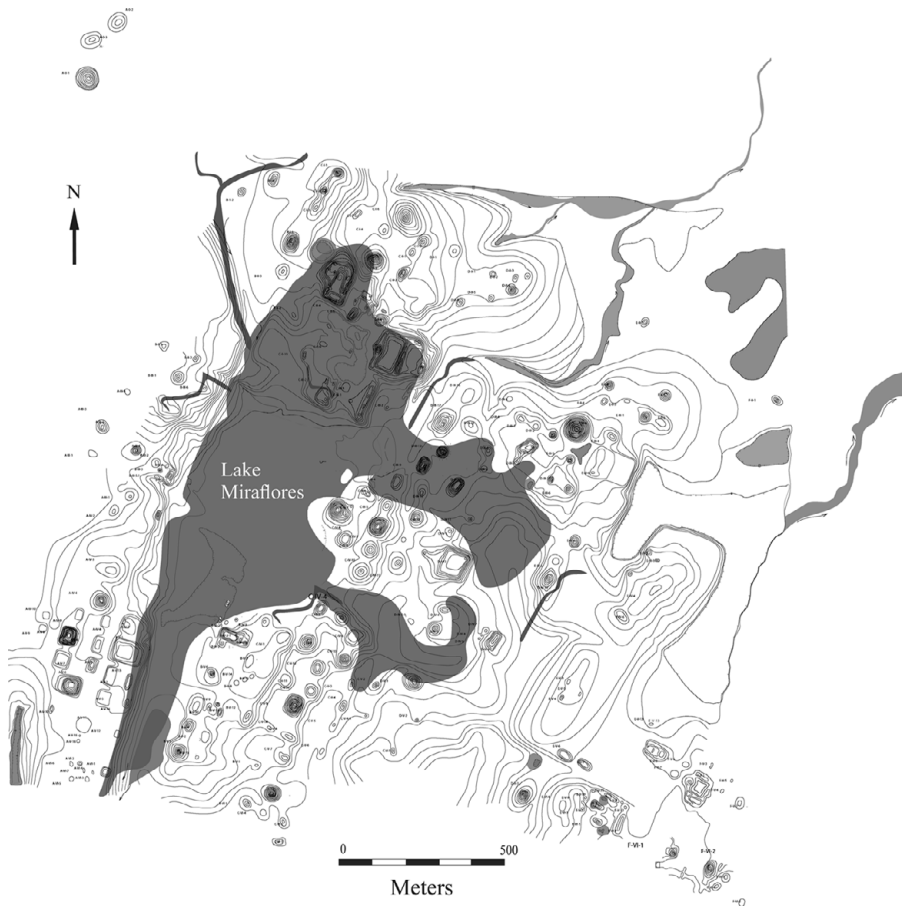
The abandonment of Naranjo around 400 BCE was undoubtedly linked to the rise in population and an increase in construction activity at Kaminaljuyu soon afterwards (Arroyo 2018). We do not know whether the transition was merely logistical, meaning a change in the location of governmental structures, or if it resulted from the transfer of political authority from one group to another. The shift of capitals, however, parallels events on the Pacific Coast with the slightly earlier transition from La Blanca to El Ujuxte (Love and Rosenswig, Chapter 7).

THE RISE OF KAMINALJUYU

In a consideration of Kaminaljuyu as an urban center beginning in Preclassic times, we should begin with a discussion of its size. To do so, we must integrate data from a number of sources as well as recognize the fact that the scale of Kaminaljuyu has been the subject of much debate.

The Carnegie Institution mapping project proposed a conservative 5 km² for the site's core. Its illustration of the layout of the Preclassic site core shows the presence of buildings with alignments oriented 21 degrees east of north on the shores of Lake Miraflores (Michels 1979). Other building complexes formed discrete plazas with various mounds throughout the urban center (Fig. 6.4). However, the Carnegie map omits many buildings to the north and northeast of the site core, including several low platforms. It is possible that at the time of the Carnegie mapping project this area was either a dense forest or off-limits to archaeologists. The same thing occurred in the southern section, where a recent survey has noted the possible presence of low platforms that are not shown on the Carnegie map.

Recent studies all agree that the Carnegie map dramatically underestimates the true size of ancient Kaminaljuyu. Michael Love (2011a: 58) has estimated a minimal extent of 8 km² during the Late/Terminal Preclassic, while other estimates go as high as 24 km² (Ponciano 2002). Early surveys almost exclusively focused on the presence of large mounds, so we are uncertain as to the



6.4. Kaminaljuyu site map. Shaded area indicates the maximum extent of Lake Miraflores at c. 200 BCE. Map by author

extent of habitation zones that, beyond the site core, may have lacked such large architectural constructions. In fact, the territorial extension of Kaminaljuyu could have covered 84 km², particularly if one includes, within the boundaries of this larger estimate, the sites that Edwin Shook (1952) identified as separate settlements. All of them possess the same ceramics, earthen architecture, plain monuments, and other cultural features present at Kaminaljuyu proper.

Most of the ancient structures utilized a combination of earthen architecture and perishable materials and, originally, there appears to have been over 200 large buildings at Kaminaljuyu (Fig. 6.4). Some information can be reconstructed based on earlier studies and recent research carried out in the remaining sections of the site. However, much of the recent work is published in reports on individual mounds and, to date, we lack an overarching perspective on Kaminaljuyu's development, particularly for the Preclassic period.

Several scholars have attempted to offer population estimates, including the Pennsylvania State University research project (Michels 1979). Sanders and Michels conducted an intensive survey on the western edge of Guatemala City and arbitrarily defined a 600 km² region around the site. The survey covered 50 percent of this area. A number of areas to the east and north were spot-surveyed, providing data for an additional 400 km². The 1,000 km² survey area was divided into six ecological zones, and Kaminaljuyu was defined as a 7.5 km² core area with monumental constructions and associated habitation areas. Population density was estimated based on results from excavations in this surveyed area, with a total of 20,000–30,000 people proposed for the Terminal Preclassic.

The population estimates of Sanders and Michels were done in the 1970s, when damage to the ancient city caused by modern commercial and urban expansion had already impeded an accurate understanding of the ancient city's growth. Despite this attempt, there was no consistent methodology to gather data or to calculate population size and characteristics for both central Kaminaljuyu and its rural hinterland. Sanders and Carson Murdy (1982) proposed that, between 800 and 400 BCE, there was initial population growth with population centralization. From 400 BCE to 1 CE, there was rapid population growth. Between 1 and 200 CE, population decline was observed with extreme population centralization. From 200 to 500 CE, population growth was observed again; between 550 and 850 CE, an increase in population was noted in the northern section of Kaminaljuyu, along with population decentralization. They determined that, subsequently, soil erosion led to an increase in nucleation.

Recent population estimates reflect a different story, however, and large-scale rescue programs have exposed sizeable areas that indicate both the practice of intensive agriculture (Popenoe de Hatch 1993, 1997) and the presence of a sophisticated system of hydraulics at ancient Kaminaljuyu (Arroyo et al. 2016a; Arroyo and Henderson 2020). Recent work on the site's western core indicates the existence of previously unknown large-scale activity areas that also reflect substantial labor investment (Rodríguez 2017; Serech et al. 2016). The results from these excavations have provided important information regarding the non-visible structures and activity areas that were overlooked or dismissed by programs focused solely on large structures.

Although the data are still under analysis, a brief description of the preliminary findings is possible. The area of investigation included a wide exposure of 600 m² that uncovered pottery fragments of as many as 500 jars of a distinctive ware called Monte Alto Red (Arroyo et al. 2016a). These jars were of different sizes, suggesting they may have been used as storage containers for various materials (Arroyo 2020). Abundant seed remains were recovered in association with these vessels, including cacao, corn, pumpkin, and beans. In addition to

the Monte Alto pottery, another forty-two complete vessels were recovered, which indicates that diverse activities took place at this location. The Monte Alto jars have been dated to the Late Preclassic and first part of the Early Classic period. However, the area has revealed, as well, evidence of activity and occupation stretching from the Middle Preclassic to the Late Classic.

Such dense deposits in a limited area indicate that the population estimates by earlier research programs were far too low because they presumed a highly dispersed habitation. Because the area of these recent excavations is relatively small, however, it may not be realistic to apply a higher density population to the entire city. Nevertheless, these recent investigations reveal how precarious it is to calculate population based on surface surveys and limited excavations.

AGGREGATION, TRADE, AND CULTURAL DIVERSITY

Because of Kaminaljuyu's strategic location at a natural crossroads, and the commercial nature of the city, people of diverse backgrounds and places of origin undoubtedly passed through it. Many products were exchanged at Kaminaljuyu, as witnessed by obsidian artifacts, jade, cacao, ceramic wares, and minerals, among others. Diversity was the norm in the cities of the highlands and Pacific Coast, both ethnically and linguistically (Love 2011a: 52).

The results of isotope analysis carried out on bones from burials document the varied places of origin of some of Kaminaljuyu's inhabitants. Domestic burials from Mounds A-IV-3 and B-IV-2 indicate an origin in the Petén region of the Maya Lowlands. Other burials suggest that individuals arrived from the Motagua valley of eastern Guatemala, including those in A-III-2, A-III-3, and A-V-3, while a decapitated skull from Tomb A-III-1 suggests that the individual hailed from the Maya Mountains of Belize or the Quiché region of the Maya Highlands (Wright et al. 2010). Among the elite burials, examples studied so far indicate possible origins at diverse locations extending from Teotihuacan in the Valley of Mexico, to the Caribbean coast of the Maya Lowlands and Tikal in central Petén. Although the sample is small, the number of places of origin of the individuals buried at Kaminaljuyu suggests that various groups with different ethnic and linguistic backgrounds coexisted at the site and practiced similar mortuary traditions.

Those born at Kaminaljuyu also traveled widely. Stable isotope analysis of sacrificial individuals from the Moon Pyramid at Teotihuacan (Sugiyama, Chapter 8) indicates that some of them may have originated in the Maya Highlands, which suggests Kaminaljuyu as a potential place of origin (White et al. 2007). These data underscore the extent of long-distance contact that Kaminaljuyu had with major centers outside the Valley of Guatemala.

In addition to the osteological evidence, ceramic evidence demonstrates extensive imports and we can infer the presence of individuals from various locations beyond the Valley of Guatemala. Chemical analysis has demonstrated

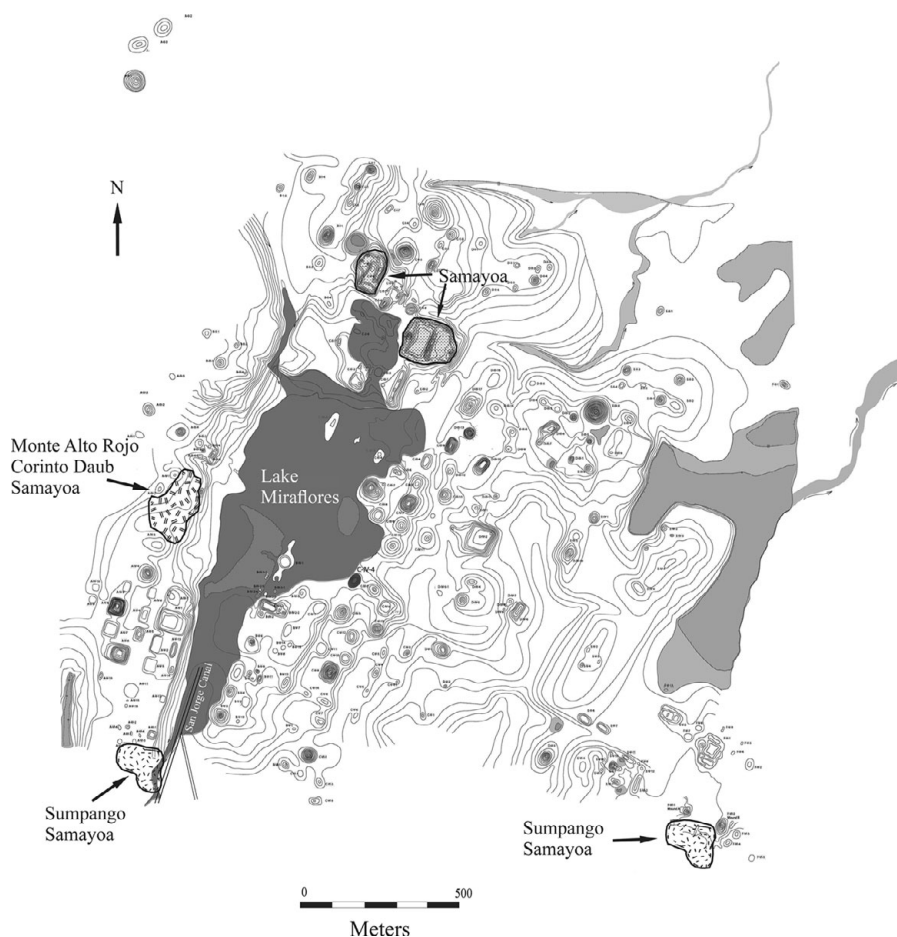
that the white paste Xuc ware has its origins to the west of Kaminaljuyu. Similar ceramic bowls sharing the same chemical composition were recovered at sites in the western highlands, including Uspantán, Uatlán, and Zacualpa. A cylindrical tripod recovered in one of the Early Classic tombs in Mounds A and B was manufactured on the Pacific Coast, and a few other vessels were imported to Kaminaljuyu from the northern Petén (probably the sites of Tintal, Nakbé, or El Mirador). Other examples of imported vessels include a black-slipped plate from Ixtonton in Dolores, Petén, as well as those from the Motagua Valley and the Alta Verapaz region of Guatemala (Reents-Budet et al. 2006).

Neighborhoods in Kaminaljuyu

In addition to the documentation of the imported vessels listed above, recent research has unearthed localized ceramic complexes that reflect neighborhood organization at Kaminaljuyu. Utilitarian pottery types such as Corinto Daub, Samayoa, Monte Alto Red, Navarro, San Jorge, and Sumpango have distributions that suggest residence-based groups in the city (Fig. 6.5). After studying ceramic type density and distribution, my colleagues and I developed a proposal for how these types map onto districts or neighborhoods in Kaminaljuyu. These districts or neighborhoods represent a heterogeneous population, and may indicate diverse social identities that were important to the ancient residents of this city.

The term *neighborhood* has been proposed as an essential element of cities by a number of scholars (Arnauld 2012; Hendon 2012; Hutson 2016; M. E. Smith 2010a; Smith and Novic 2012). These studies show that neighborhoods exist in nearly all cities and that this concept can be operationalized in the analysis of ancient urban settlements (see also the contributions by Pool and Loughlin, Chapter 3, and Love and Rosenswig, Chapter 7). The concept is better applied when considering spaces used by commoners, since such spaces reflect a broader sphere of social interaction. I utilize the term “neighborhood,” as opposed to “barrio” (employed, for example, at Teotihuacan), so as to avoid any suggestion that these spaces were the result of an administrative division imposed by the elite. Considering that, at Kaminaljuyu, we are dealing with domestic areas that were used by commoners, the concept of neighborhood best matches the site’s data and, as an analytical category, accommodates spaces of varying size. Neighborhoods also, once identified, enable more fine-grained consideration of spatial proximity, shared practices, and their implications. As Julia Hendon (2012) argued, inter-subjective interactions that construct social identities and reproduce social relationships through time are located in specific spaces, and become an implicit part of the way people go about their daily lives.

Neighborhoods at Kaminaljuyu likely were composed of residents that formed a community with a sense of identity based on genealogy, location, and practice. The neighborhoods might have represented population



6.5. Late Preclassic neighborhoods in Kaminaljuyu defined by the ceramic wares indicated for each area. Map by author

aggregation, achieved through group consensus. At least during the Late Preclassic period, evidence suggests that neighborhoods of diverse people coexisted without obvious conflicts or, stated differently, that such aggregation reflected a peaceful arrangement. While it is entirely possible that different ethnic groups separated themselves within particular neighborhoods, we can nevertheless suggest that Kaminaljuyu's neighborhoods matched, or reflected, the dynamic nature of the larger city as an important trade center. In fact, aggregation might just as well have been a result of trade. Groups might have assembled depending on the type of products they produced and exchanged. Additional evidence of neighborhoods in Kaminaljuyu comes from pottery, obsidian, architectural features, and the types of construction materials used to build structures. However, the ceramic data are the most refined, and they indicate that different groups aggregated at Kaminaljuyu, settled in specific locations in the city, and continued to share practices that reflected enduring social identities.

Several examples illustrate these points (Fig. 6.5). The largest concentration of Monte Alto Red, a ceramic type that consists mostly of jars used for storing cacao seeds according to Marion Popenoe de Hatch (1997), was recovered at a section between Mounds A-IV-1 and A-IV-2 west of Lake Miraflores. Similar examples were also recovered in the San Jorge and Miraflores sectors in the southern portion of the site, but in much fewer numbers than those from Mounds A-IV-1 and 2.

The Corinto Daub type is related to pottery documented at the site of Tulumaje, in the modern Guatemalan Department of El Progreso, east of Kaminaljuyu, as well as to the site of El Portón in Baja Verapaz (Sharer and Sedat 1987). This type was common during the Middle and Late Preclassic periods, and at Kaminaljuyu it has been interpreted as a utilitarian pottery of non-local origin (Popenoe de Hatch 1993). Corinto Daub is common in Mound A-IV-2 and the surrounding area west of the lake, but almost absent from the neighboring A-IV-1 mound. It is completely absent from the Acropolis and Palangana, the sectors of the ancient city located just north of Lake Miraflores and now within the present-day Kaminaljuyu archaeological park (Fig. 6.5). The pottery type found in the area of the Acropolis and Palangana is Samayoa, which has also been linked to Corinto Daub in the San Jorge and Quinta Samayoa sectors in the southern portion of the site.

Another type, Sumpango, corresponds to the same time period as Corinto Daub but does not coexist in the same sectors. Sumpango is a ceramic ware that began to be produced during the Middle Preclassic, becoming very popular during the Late Preclassic Verbena and Arenal phases. The type is very common in most Preclassic contexts at Kaminaljuyu, but absent at Mounds A-IV-1 and A-IV-2.

Our suggestion is that the zones defined by these utilitarian wares could represent distinct Late Preclassic neighborhood groups, which shared a common identity based on point of origin before immigrating to Kaminaljuyu (Fig. 6.5). They shared a certain level of physical proximity within the site but may also have reflected the boundaries of specific activities as well as an urban conceptualization of social belonging and identity.

Landscape was also a powerful determinant on the way these neighborhoods took form within the confines of Kaminaljuyu. While the Valley of Guatemala is a large plain, there were many natural ridges and elevations in ancient Kaminaljuyu that might have served as boundaries between neighborhoods. In addition, disparities in the ancient hydraulic infrastructure reveal that some sectors had abundant water deposits, some had ready access to freshwater springs, and others had to access water through canals or other means of water collection. Many of these disparities were linked to a neighborhood's relative proximity or accessibility to Lake Miraflores, an important water source for Kaminaljuyu's Preclassic society. It is worth considering the possibility that

access to water played a key role in structuring spaces and differentiating the types of activities performed in each neighborhood.

THE PRECLASSIC LANDSCAPE

Scholars have recognized that ancient Mesoamerican cities often represented a microcosm, with their layouts incorporating beliefs about the universe (Ashmore 1989, 1991; Ashmore and Sabloff 2002). On a more mundane level, the conscious effort of people to settle in a particular area was linked to certain features of the surrounding landscape, which accommodated the needs specific to a distinct social group. In the case of Kaminaljuyu, one needs to understand the topography of the central highland Valley of Guatemala. Kaminaljuyu sits on the continental divide, along what was a commercial route between the Maya Lowlands, the eastern Motagua River, and the Pacific Coast. In addition to hills, mountains, and volcanoes, this area was characterized by the presence of several lagoons or ponds. In fact, colonial documents refer to the existence of a lagoon system favoring settlement in this part of Mesoamerica during Prehispanic times (Fuentes y Guzmán 1969–1972).

The first clay platforms at Kaminaljuyu were built next to Lake Miraflores. By 350 BCE, a planned system was in place as evidenced by the alignment of structures that mark some of the larger complexes next to the lake. While it is impossible to fully reconstruct the Middle Preclassic building arrangements at Kaminaljuyu, one can reconstruct a preliminary scene based on the maps and research results from the first sixty years of the twentieth century.

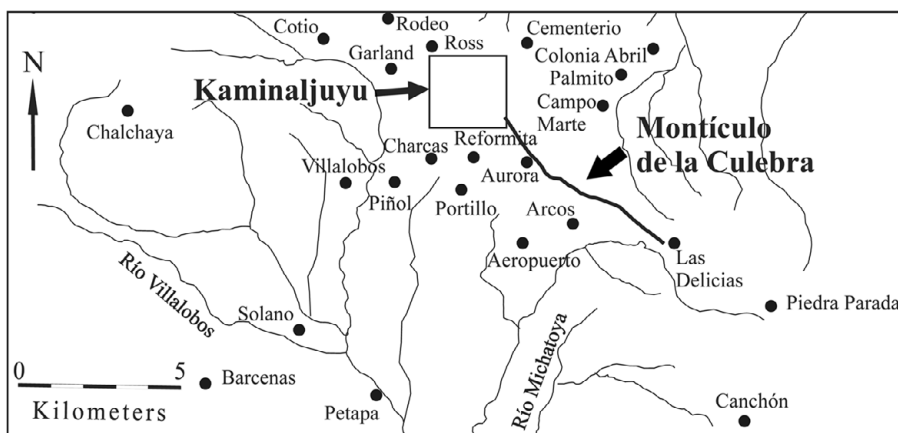
An alignment of 21 degrees east of north was used for early constructions (Figs. 6.4 and 6.5). While most buildings date to the Late Preclassic (200 BCE–200 CE), excavation of some mounds has revealed earlier occupations, with a few also demonstrating later Classic-period occupation above. The azimuth of 21 degrees east of north has been linked to the astronomical orientation of Eta Draconis and calendric observations (Popenoe de Hatch 2002). If this interpretation is correct, it indicates that concepts of astronomy were integrated into the landscape and architectural arrangement of the site itself. Accordingly, we can suggest that the inhabitants of Kaminaljuyu were engaged in constructing a microcosm of the larger universe.

Interestingly, the practice of orienting structures 21 degrees east of north began in Middle Preclassic times as demonstrated by Naranjo. But Naranjo was not unique: the orientation has been documented at a number of Middle Preclassic sites in the Valley of Guatemala (Shook 1952) as well as on the Pacific Coast. The orientation of La Blanca, for example, at 22 degrees east of north, is strikingly close (Love and Rosenswig, Chapter 7). The astronomical knowledge behind these orientations is one reflection of a broader corpus of scientific knowledge, including engineering and mathematics, which was shared by Late Preclassic elites in various regions (see Guemsey and Strauss, Chapter 9).

Water, Hydraulics, and Urbanism

A careful analysis of results from many earlier rescue programs, in conjunction with recent excavation data, provide additional information on the importance of water and water manipulation throughout the history of placemaking at Kaminaljuyu. As noted previously, Lake Miraflores was key to the establishment of Kaminaljuyu, and water manipulation was vital to the development of early urbanism throughout the city. Popenoe de Hatch (1993, 1997), Tomás Barrientos (1997, 2000), and Erick Ponciano (2000) uncovered important agricultural canals to the south of the site, which brought water to agricultural plots as early as 600 BCE. Although Lake Miraflores has long been recognized as a source of water for agricultural purposes, recent findings have revealed a sophisticated hydraulic system that conducted water throughout Kaminaljuyu (Díaz 2016). From Preclassic times on, Kaminaljuyu society manipulated the landscape and structured the layout of the city to accommodate access to water.

One of Kaminaljuyu's most important architectural features is the long earthen work known as the Montículo de la Culebra, which has been interpreted as a hydraulic construction (Fig. 6.6) (Ohi 2001). A colonial aqueduct was built on top of the mound, suggesting that the original Precolumbian structure had the same function. The surviving section of the mound is 5 km long, and was built beginning in 600 BCE in the shape that still, to this day, curves over the landscape. In fact, it begins, in the south, at a water spring that still provides water to a large section of modern Guatemala City. The Montículo de la Culebra was begun during the Charcas phase with the construction of low clay platforms, and Gustavo Martínez Hidalgo and Tania Cabrera Morales (1999) suggested that this early construction included a canal with hydraulic functions. A significant enlargement of the Montículo de la



6.6. Extent of the existing sections of the Montículo de la Culebra aqueduct. Map by author and Michael Love

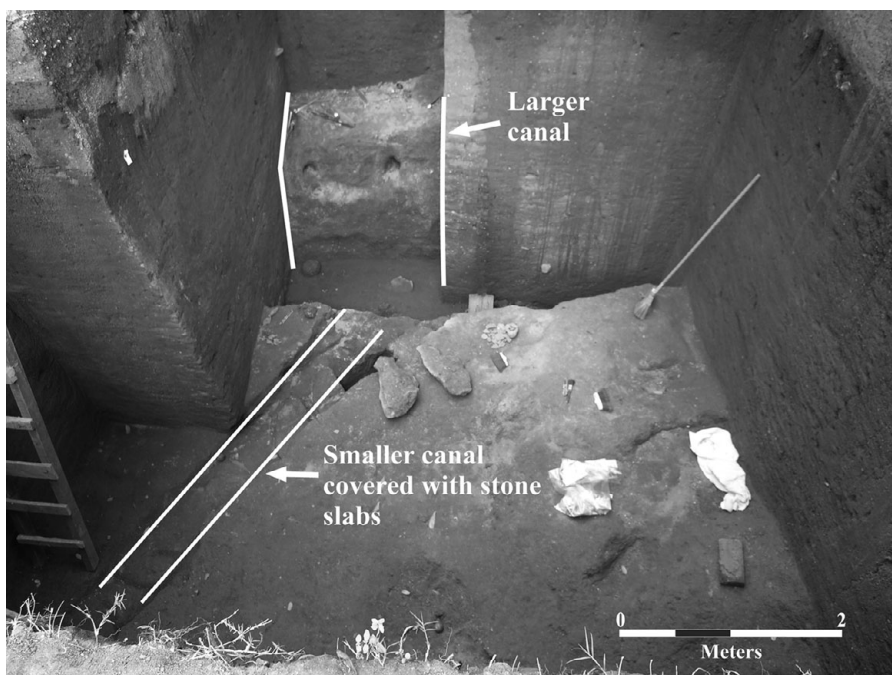
Culebra was undertaken during the Providencia phase, which raised the structure to a height exceeding 5 m (Martínez Hidalgo and Cabrera Morales 1999; Ortega 2001; Ortega and Edgar 2001; Ortega et al. 1996).

Because of modern-day destruction of most of the Montículo de la Culebra, how exactly this structure was connected to the ancient city is not well understood. While the Montículo de la Culebra fed the southern end of Lake Miraflores, other water sources to the north may have supplied water to the northern portion of the lake (Arroyo 2020). A colonial map from 1776, dating to prior to the founding of Guatemala City in the central valley, describes Lake Miraflores as being “filled and emptied as needed” (Arroyo et. al 2016b).

The role of other water sources to the north of Kaminaljuyu has not been considered previously. But examination of the topographic map of Kaminaljuyu suggests the possibility of water being fed into Lake Miraflores from the northern part of the site. The recent finding of a canal section to the west of Lake Miraflores further supports this idea. Interestingly, according to Shook’s (1952) survey, most sites to the north of Kaminaljuyu date to the Classic period (although some have a Preclassic occupation), which may suggest a larger role for northern water sources in later times. It could be that there was a problem with water distribution from the Montículo de la Culebra at the end of the Preclassic period, which forced the inhabitants of Kaminaljuyu to seek alternative water sources, which in turn promoted links between groups to the north and the population located to the southwest where water was being directed. A colonial-era aqueduct also brought water from the north to the Spanish city of Guatemala after it was established in the valley.

Lake Miraflores has been described as a depression caused by a volcanic fault that was fed by rain and fresh water springs. These water sources, however, were not enough to feed the lake if major canals were used for agricultural irrigation. Recent reanalysis of rescue program reports has provided data on a larger and more sophisticated hydraulic system, which likely required centralized authority and organization not only to construct but also to maintain and control. This system necessitated a hydraulic infrastructure, as well as consideration of the urban layout of the city and its complex social organization.

Earlier research identified three large canals, carved into sterile soil, which directed water from Lake Miraflores to the southern outskirts of the urban center. These canals appear to have been designed to carry water to agricultural fields (Barrientos 1997; Popenoe de Hatch 1993). Recent rescue projects have unearthed remains of a more specialized system and enabled us to broaden our understanding of a complex system of hydraulic management that extended beyond purely agricultural concerns. This system consists of both large agricultural canals and smaller ones, with a network of even smaller waterways that



6.7. View of large and small canal networks (highlighted in white) found by the Proyecto de Rescate C-IV-4 at Kaminaljuyu. Photo by author

distributed water to sections of the site that had never been considered to be water collecting areas (Fig. 6.7). Such an elaborate system would have required a complex organization of controlled labor and large-scale planning.

The purpose of such ample water distribution was twofold: subsistence and symbolism. For example, there is archaeological evidence that important rituals took place in conjunction with the sealing or termination of the canals. In some cases, skulls were deposited inside the canals, indicating potential sacrificial practices associated with sealing these important waterways. These more symbolic aspects of water were also reflected in the imagery of Preclassic stone monuments including magnificently carved stelae, panels, altars, and other sculptural forms that, together, reference an iconographic complex in which rulers and deities interacted with the aquatic world of this ancient society (Guernsey 2010b; Henderson 2013).

Altepetl and Urbanism: Local Concepts of Kaminaljuyu's Universe

But why were so many small canals built around the site? Was it so all sections of Kaminaljuyu could have water for subsistence purposes? Or was it also intended to create an aquatic landscape, where waterways flowed alongside mounds that served as symbolic “mountains”? During the Late Postclassic period, the term *altepetl*, or “water mountain,” was synonymous with the

concept of an urban center (Fash and López Luján 2009; Hirth 2003). The antiquity of a concern for articulating the symbolic significance of water is well demonstrated among the Maya and other Preclassic peoples of Mesoamerica (Arroyo and Henderson 2020; Cyphers and Di Castro 2009; Guernsey 2010b; Henderson 2013; Scarborough 1998). Water also functioned, in Mesoamerican worldviews, as a transformational boundary, simultaneously separating and connecting cosmic planes (Dunning et al. 1999: 657). While the term *altepetl* is a Postclassic one, similar understandings of the centrality of water to both a practical and symbolic conceptualization of the city existed since Preclassic times.

When discussing a city, one often thinks of the urban center alone. However, the concept of *altepetl* extends beyond the urban center. It includes the surrounding households, agricultural land, vegetation, bodies of water, fauna, landscape features such as hills, mountains, and volcanoes, and astronomical features that can be seen from the city. Kenneth Hirth (2003) proposed that the concept of *altepetl* encompassed the ruler, the sustaining population, and the geographical territory involved. There was, in other words, no separation between urban and rural in this conceptualization.

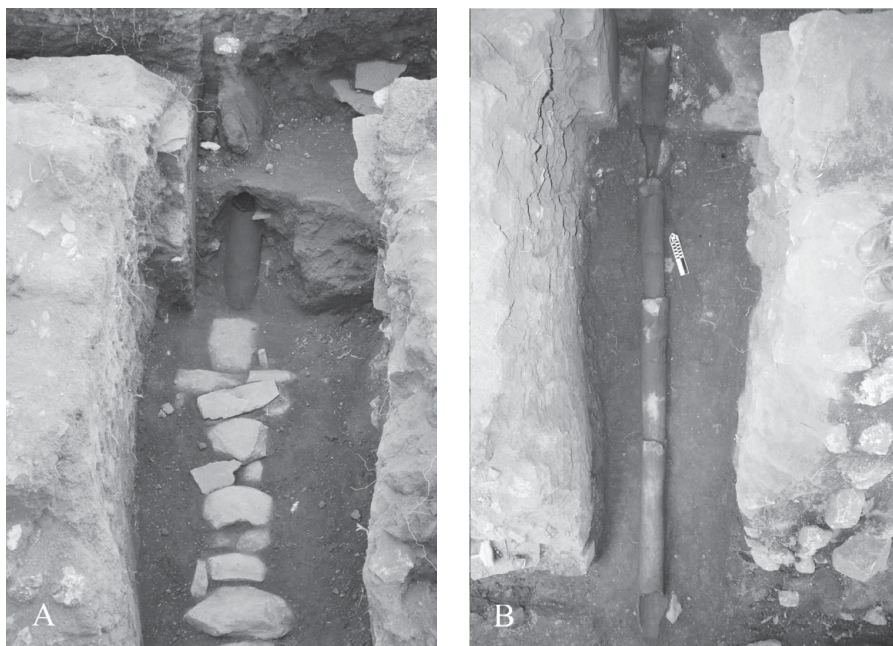
We can apply the concept of *altepetl* to Kaminaljuyu, cautiously, with the recognition that corporate groups were constituted very differently in the Preclassic period than in the Postclassic. On a grand scale, Kaminaljuyu can be understood as a city whose geographical identity encompassed the volcanoes of Agua, Fuego, and Pacaya, which still loom above modern Guatemala City. Michael Blake's (2013) recent analysis of the site's orientation confirms that it was probably oriented towards Fuego, one of the most active volcanoes in the volcanic chain. In addition, this area, which encompassed lagoons in the central valley, boasted a unique biodiversity of fauna, as demonstrated in the study published by Kitty Emery et al. (2013). The extensive canal system that was part of Kaminaljuyu's spatial arrangement would have enabled an array of plants, orchards, and flowers to flourish, creating a sense of abundance attested by a recent macrobotanical analysis that documents the presence of a diverse horticultural landscape (Trabanino et al. 2016).

James Lockhart (1999) translated *altepetl* as "city," and the term is rife with understandings that the best landscape to build households on is one that can be geographically defined by the presence of a body of water in addition to the ecological and physiographic conditions necessary for survival. Comparable understandings apply to ancient Kaminaljuyu, where Lake Miraflores, the surrounding landscape, and numerous buildings and canals constituted the city. Some of these structures appear to have been built in order to facilitate management of a section of the canals (Alvarado and Díaz 2014; Díaz 2016). This evidence indicates the presence of an organized architectural system in which the purpose of specific buildings or temples was directly related to the

control of water. Such a suggestion calls to mind similar, although much more complex, networks of water temples in Bali (Lansing 2007). Important natural resources, such as basalt outcrops that supplied the raw material for stone monuments, also formed part of the larger Kaminaljuyu landscape. So, too, did the obsidian quarry of El Chayal, which fueled the city's success as an economic center. The valuable basalt outcrops, the result of ancient tectonic activity, were located near a fresh water source – El Cambray, near Las Delicias (Fig. 6.6) – that supplied water to the Montículo de la Culebra and contributed to the sophisticated hydraulic system that fed Lake Miraflores and irrigated the soils of the valley floor below. Already by Preclassic times, water circulated through Kaminaljuyu, and a sophisticated distribution system carried water from sections of the lake to specific areas in the site through human-made trenches (Arroyo and Henderson 2020). Another large system of channels and floodgates served to irrigate agricultural fields in the southern sector of Kaminaljuyu, beyond the city center (Popenoe de Hatch 1997).

Between 150 and 200 CE, something happened that diminished the availability of water at Kaminaljuyu. Mesoamerica's well-recorded drought towards the end of the Preclassic period, sometime around 150 CE, might have been responsible for this situation. Paleoenvironmental studies indicate that drought conditions affected many parts of Mesoamerica, including the Guatemalan Highlands, the Mirador Basin, Belize, the Gulf Coast, and the Pacific Coast (Kennett et al. 2012; Lohse et al. 2018; Lozano García et al. 2010; Neff et al. 2006; Popenoe de Hatch et al. 2002; Velez et al. 2011; Webster et al. 2007). It is possible that the sources providing water to the Montículo de la Culebra suffered as a result of the drought, which would have affected the entire hydraulic network. Other events may have played a role as well. Popenoe de Hatch (1999) proposed that an intrusive group from the northwest highlands took over Kaminaljuyu at the beginning of the Classic Period. Although an invasion or population replacement is not evident, social instability caused by the environmental pressures could have favored foreign intrusions into sections of the site. Groups in the northwest highlands had ties to Central Mexico, a connection that becomes particularly clear around 400 CE when Teotihuacan-style architecture and other features show up in the archaeological record of Kaminaljuyu.

Water-handling technology at Kaminaljuyu became even more sophisticated during the Early Classic period. Since water was more limited than it had been in the Preclassic, a more elaborate and controlled system was required. Many of the areas that had circulating water during Preclassic times were buried under intentional fill to accommodate the changing landscape. Recent findings by Gloria Ajú and Andrea Rojas (2013) indicate a sophisticated arrangement, which included ceramic pipes used for conducting water between mounds and sections of the site center, in place by around 400 CE

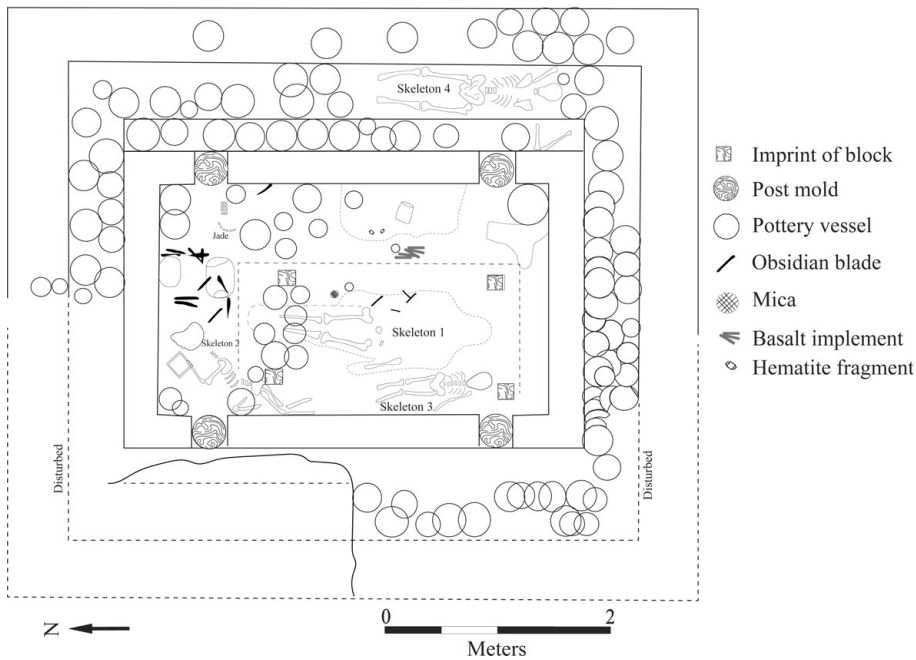


6.8. Early Classic ceramic tubes used for water transport at Kaminaljuyu: (a) View of stone boxes protecting ceramic pipes; (b) View of ceramic pipes underneath stone boxes. Photos by author

(Fig. 6.8). The large agricultural canals of the Preclassic were no longer used. Instead, the network of ceramic pipes played a role in directing water throughout the site and feeding it into various ponds, and several springs were also integrated into this water distribution system. Aquatic zones of the Preclassic city also diminished significantly in the Classic period. In fact, areas that were once part of Lake Miraflores were settled, and other sections where the lake had dried up became agricultural fields (Valdés and Valladares 2014). Faunal remains from Classic contexts document, for the first time in the history of the site, a significant presence of gar bones, a fish species that lives in standing water or ponds (Emery et al. 2013).

While some ponds might have been used for raising fish, other sunken areas that collected water may have served ritual purposes. Recent excavations at La Palangana, located in what is today the Kaminaljuyu archaeological park, have shown that there was standing water in this sunken court during the Early Classic period (Ajú 2017). A sophisticated drainage system may have served to direct water towards the center of the court.

Our recent archaeological data accord well with other isolated findings throughout the many years of various rescue projects and underscore the importance of water management in Kaminaljuyu's history. The construction of such sophisticated and integrated water management systems could only be attained through careful planning and powerful centralized control. Michels



6.9. Plan of Kaminaljuyu Tomb II in Mound E-III-3. After Shook and Kidder (1952: fig. 15)

(1979) proposed that Kaminaljuyu was the center of a valley-wide chiefdom. More recently, Love (2011a, 2016a), using the settlement surveys of Shook (1952) and Murdy (1984), proposed a regional system for Late Preclassic Kaminaljuyu that involved a four-tier hierarchy of settlements extending beyond the central valley. Consistent with this view are other trappings of centralized authority, including large pyramids, some up to 20 m in height (such as Mound E-III-3, the largest mound in the northwest area of the site), rich tombs (Fig. 6.9), and carved stelae that display hieroglyphic inscriptions and representations of individuals in elaborate regalia (Parsons 1986). Such imagery, which was part of a broader Late Preclassic iconography of rulership (Guernsey 2010b, 2011; Guernsey and Strauss, Chapter 9), situated Kaminaljuyu's kings as responsible for the maintenance of agricultural cycles and the arrival of rain (Henderson 2013).

CONCLUDING THOUGHTS

Perhaps because of the modern-day destruction of the site and its hinterland, few researchers have recognized the extent of infrastructure and planning present at Preclassic Kaminaljuyu, a situation compounded by the fact that recent rescue projects are able to obtain only glimpses of the once expansive city. Yet some conclusions can be offered. The water management system in use from Preclassic to Classic times is strong evidence of a centralized

authority's control over large infrastructure projects and essential resources. Such feats could only have been accomplished through a complex system of government that was responsible not only for water management, but for overseeing the obsidian production at El Chayal as well as the exchange of jade, cacao, feathers, salt, and any number of other resources vital for sustenance and ritual display. Kaminaljuyu's strategic location at the crossroads between the Maya Lowlands, the eastern Motagua valley, the Pacific Coast, and the northern highlands of Guatemala placed it at the center of many social, political, and economic developments. If the watery landscape described here is confirmed through our ongoing investigations, we can also conclude that Kaminaljuyu projected symbolic meanings centered on ancient themes concerning water and mountains onto the Preclassic cityscape. Some of the ideas presented here are a work in progress; but they represent the first steps in bringing back the flesh to Kaminaljuyu's bones.

ACKNOWLEDGMENTS

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CHAPTER SEVEN

THE NEW NORMAL

Formative Period Cities on the Pacific Coast of Southern Mesoamerica

Michael Love and Robert M. Rosenswig

THE FORMATIVE PERIOD OF MESOAMERICA SAW THE DRAMATIC transformation of the way in which people lived. During the Early Formative period (2000–1000 BCE), villages were established throughout most of Mesoamerica as people became fully sedentary after many millennia of experimentation with cultivation (Love 2011a; Rosenswig et al. 2015a). The first sedentary settlements were small-scale affairs, but they represented the initial steps on a path of rapid social change (Rosenwig 2010). By 1000 BCE, we can see the first clear signs of city growth in a limited number of areas, and by 300 BCE settlements that were undeniably urban were present throughout much of Mesoamerica. The pace of change was such that every person probably experienced notable transformations in the course of her or his lifetime.

The effects of urbanism extended far beyond the largest settlements and even those who lived outside the major cities felt the impacts of urbanization; ruralization is, after all, the counterpoint to urbanization. The largest cities of 300 BCE and later were also the capitals of early states. These polities were small, and perhaps best described as micro-states, city-states, or kingdoms (Love 2011a; Rosenswig 2019), but their political, social, and economic networks stretched beyond the boundaries of the capital and beyond settlements directly linked to major trade routes.

In the region we analyze in this chapter, secondary centers were themselves small cities by the Late Formative, covering several square kilometers and having notable public architecture. The survey data we present here from

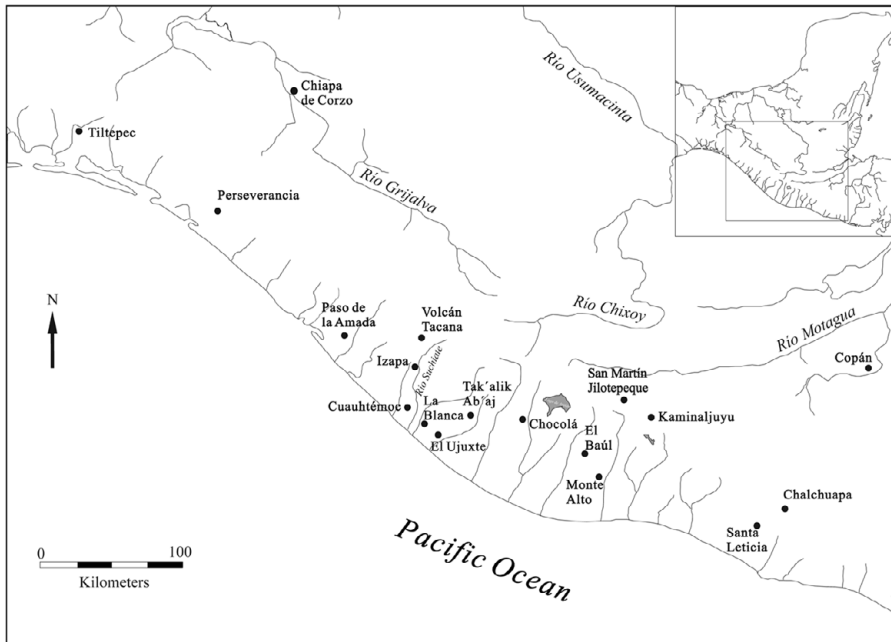
the Soconusco region¹ demonstrate that a very large percentage of regional population lived in either a capital or a second-tier center by the late Middle Formative period, after 600 BCE. By the Late Formative, a majority of the population lived in one of these cities. How and why did living in cities come to be the norm?

Our analysis focuses on the growth in overall settlement size as a measure of urbanization. We avoid estimating population for these settlements simply because the exercise is arbitrary and because we wish to avoid artificial thresholds for defining when a settlement is judged to be a city. One of the many problems in analyzing urbanization and urbanism in Formative period Mesoamerica is the lack of good population estimates, due in large part to the failure to analyze settlements as cities. Referring back to [Table 1.1](#) (Love, [Chapter 1](#)), we think that the settlements we discuss as cities fit very comfortably within the ranges defined in other parts of the world.

Many of the chapters in this volume highlight the ideological reasons why people were drawn into large settlements and the symbolic expression of those desires through cultural landscapes that replicated sacred principles. We do not dismiss those insights in any way, but we highlight that aggregation and urbanization were, in fact, overdetermined by a confluence of demographic, economic, social, and symbolic factors. It was the synergies of those many factors that led experiments in aggregation to result in the urban explosion of the Late Formative. While the symbolic and ideological expressions of city forms are what leap out at us today because of their visual power, we cannot ignore those other powerful dimensions of social and economic life. The economic changes in life during the Middle and Late Formative periods were every bit as dramatic as the ideological and intellectual. We do not seek here to privilege one dimension of change over another, but rather to point out the breadth of change in social life.

Our study area encompasses the modern-day border region of Chiapas, Mexico, and Guatemala, including the coastal plain and the piedmont ([Fig. 7.1](#)). Cities here grew out of Early Formative villages and, at the beginning of the Middle Formative period, large numbers of people aggregated at La Blanca, a settlement whose size makes it a candidate for the moniker of “city.” By the Late Formative period, the Pacific coasts of Chiapas, Guatemala, and El Salvador held one of the greatest concentrations of cities in ancient Mesoamerica (Love [2011a](#)). The Late Formative period represented the climax of Formative period trends in population growth and nucleation in many of

¹ The Soconusco region stretches from Tliltepec, Chiapas, in the northwest to roughly the area near El Ujuxte in Guatemala. It takes its name from *Xoconochco*, the term given to the region by the Aztecs to refer to the most southeasterly extension of their empire during the Postclassic period.



7.1. Map of Pacific Coast region with sites mentioned in text. Map by Love

these regions (Love 2007) and, by this time, a majority of people living on Mesoamerica's southern Pacific Coast lived in cities.

Our region forms the western fringe of what Love (2011a) describes as the “Southern City State Culture,” and was home to a number of Late Formative period city-states of varying size. The largest cities in this zone of cultural interaction included Kaminaljuyu (see Arroyo, Chapter 6) Izapa, Tak'alik Ab'aj, Chalchuapa, Chocolá, and El Baúl. These cities, and others, were linked by multiple and overlapping trade networks as well as intellectual exchanges that included elements of high culture such as art styles, writing, ritual practices, and political ideologies (Guernsey and Strauss, Chapter 9). The zone was populated by speakers of several languages, and the oft-used term “Southern Maya Region” is undoubtedly both inaccurate and reductive.

HOW URBANISM GREW

The process of urbanization along the southern Pacific Coast began at about 1700 BCE with the emergence of Paso de la Amada, whose ceremonial central area measured about 60 ha. By that early date, Paso de la Amada was laid out with formal buildings around a central plaza and held attractions such as a ballcourt (Clark 2004; Hill and Clark 2001). Whether Paso de la Amada was an economic center is debated. A review by Lesure and Blake (2002) found little evidence of economic differentiation based on quantitative analysis of

household trash. Nonetheless, Paso de la Amada marked the first steps in the emergence of centralization and aggregation of population in this region.

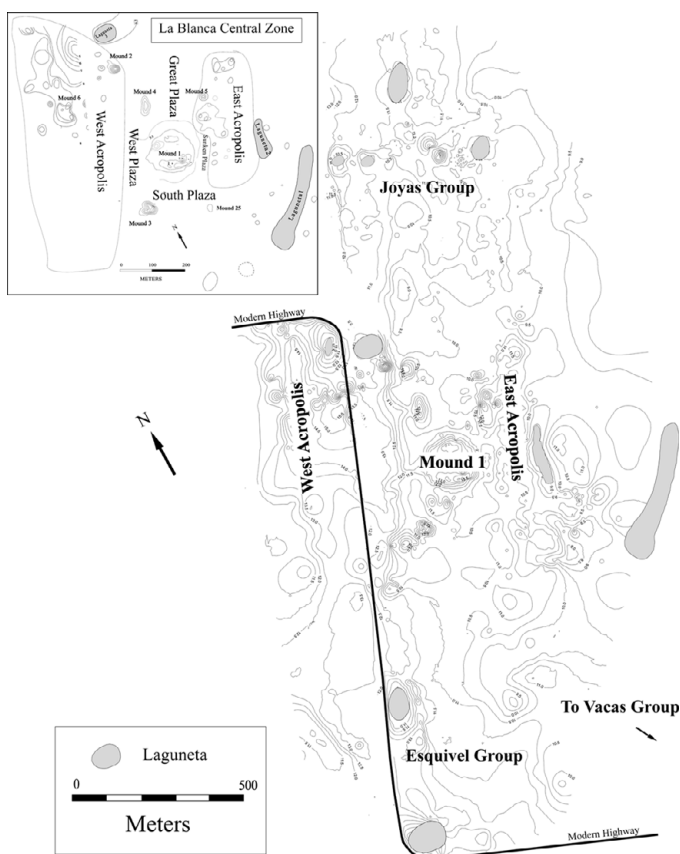
The trend to larger central places continued in the latter part of the Early Formative, with iterations at Cantón Corralito and Ojo de Agua on opposite banks of the Río Coatán. Ojo de Agua marks the first appearance of the venerable temple pyramid architectural form in the region, although, to be clear, it was constructed at a relatively small scale during this Jocotal phase (1200–1000 BCE).

All of these Early Formative settlements were central places in either religious, political, or economic terms. In Michael Smith's (2001) terminology, they would be functionally urban, but they were not large enough to be called cities. These early centers were short-lived and whatever political integration they achieved was fragile, but they are the first experiments in the aggregation of population and illustrate the development of larger centers through time.

The Early Middle Formative Watershed

The beginning of the Middle Formative period, locally called the Conchas phase (ca. 1000–600 BCE at La Blanca), was a watershed in the development of urbanism in the borderland region, marked by the foundation and growth of La Blanca (Fig. 7.2). A number of factors underscore this episode of time as critical. First, the rate of population growth was high, estimated at an average of over 3 percent per annum for 300 years (Love 2002a). Second, the extent of population migration to the capital city from the surrounding hinterland was much larger than in previous periods (Blake and Clark 1999; Love 2002a, 2016a; Rosenswig 2011, 2017). Third, economic changes brought about intensified production via a focus on the most productive resources: maize as a staple crop and the domestic dog as a protein source (Love 1999b, 2002b, 2007; Love and Guernsey 2011; Rosenswig 2006; Rosenswig et al. 2015a). These economic changes produced greater surpluses and generated greater wealth for elites who controlled production. Fourth, the scale of political integration across the region increased significantly, with La Blanca's polity stretching to over 300 km². Lastly, there was an increase in the scale of secondary centers and, for the first time, settlements beyond the capital erected monumental architecture in the form of temple pyramids over 15 m in height.

A significant part of population growth in the Río Naranjo district, which encompasses most of the La Blanca polity, was due to the aggregation at La Blanca of population from surrounding territories. At the end of the Jocotal phase the regional center of Ojo de Agua declined rapidly and it appears that much of the Mazatán zone was abandoned (Clark and Pye 2011; Pye et al. 2011; Rosenswig 2011). The explosion of population in the area near La Blanca strongly suggests that many residents from Ojo de Agua's polity migrated



7.2. Map of La Blanca with inset showing detail of central zone. Map by Love

eastward. East of the Río Naranjo, survey data paint a similar picture. The estuary zone of Retalhuleu, between the Río Samalá and the Río Ocosito, had a sizable population in the Jocotal phase, but lacks any Conchas phase occupation (Pye 1995; Pye and Demarest 1991). Surveys by the University of California Berkeley Abaj Takalik project in the 1980s identified some Jocotal phase occupation inland of the estuaries, but there was a lack of Conchas phase materials (Johnson n.d.; Love n.d.). Within the La Blanca polity, secondary centers such as Cuauhtémoc, which had been occupied for the previous 800 years, expanded in size and conical mounds were built for the first time (Rosenswig 2010). Further, the population in the area surrounding Cuauhtémoc increased to the highest levels ever during the Formative period (Rosenswig 2008).

The reasons for this coming together of people to form the new community are unclear, but it seems probable that the political structures (and rulers) of the Ojo de Agua polity were replaced by a new La Blanca elite as that polity was established in a location that had, previously, been peripheral to political developments. The founding of La Blanca brought together many people

and groups who had not previously lived in close proximity to one another. Such an aggregation would have led to a profound alteration in the way that people lived their lives and produced a very different social dynamic.

Both regional survey data and household excavations show that the founding of the La Blanca polity led to an increasingly stratified society and a much more centralized regional political system. In neo-evolutionary language, La Blanca would probably be described as transitional between a chiefdom and a state. The regional settlement hierarchy of three to four tiers suggests strong governmental structures (Rosenswig 2007, 2010), and the enormous monumental architectural structures of La Blanca (as well as its secondary centers) demonstrate an ability to command (or at least persuade) a very large body of laborers. Rosenswig (2012) argues that whatever the La Blanca polity was in typological terms, it is more productive to describe what the people who inhabited the polity *did*, and he postulates that the Conchas phase was when economic exploitation was evidenced for the first time in the region.

The City of La Blanca

The total area of the La Blanca site itself exceeds 300 ha (Fig. 7.2), making it one of the largest settlements in Mesoamerica during the Middle Formative period (Love and Guernsey 2011). Much of the city's architecture, both public and domestic, was destroyed by road construction in the 1970s. Estimates of its total scale are based on the observable habitation zones and calculations of how much of the site was destroyed by that road work.

La Blanca's ceremonial zone was centered on the temple pyramid of Mound 1, but included the East Acropolis, the West Acropolis, and Mounds 2, 3, 4, and 5. The centerline of this architectural complex points at the Tajumulco volcano, the tallest peak in Central America (Love and Guernsey 2011). The azimuth for this alignment, 22 degrees east of magnetic north, is strikingly similar to the 21 degrees shown in ceremonial complexes of the Guatemalan Highlands (Shook 1952; see also Arroyo, Chapter 6 this volume), and indicates that intellectual exchanges were part of the broader pattern of cultural and economic interaction between the coastal plain and the highlands.

La Blanca's population was dispersed within the 300 ha of settlement, and included four principal districts: the Central Group, the Joyas Group, the Esquivel Group, and the Vacas Group. Each of these districts – or residential clusters or neighborhoods – was organized around small lagunetas (large ponds or small lakes; see Fig. 7.2). These lagunetas are probably oxbows, the remnants of an old course of the Río Naranjo. Residences were constructed on low mounds, which were placed on naturally elevated ridges around the lagunetas. La Blanca is best understood as an example of dispersed urbanism, similar to other examples known from tropical zones of the world (Fletcher 2012).

Districts and Neighborhoods in La Blanca

The Central Group includes the area around Mound 1, which was constructed of rammed earth beginning soon after 1000 BCE. After several construction episodes it reached a height of over 25 m and measured 150 × 90 m at its base. Mound 1 would have visually dominated the center of La Blanca and marked the locus of ceremonial and administrative activities in the city. The primary neighborhood in this sector was the East Acropolis, a raised platform that supported a cluster of elite residences.

The center of the Joyas group lies one kilometer to the north of Mound 1. The group consists of more than twenty low mounds, thought to be residential, scattered around a pyramidal structure 6 m in height. A second small pyramid (approximately 5 m in height) and numerous residential mounds were flattened within the past ten years to accommodate modern agricultural and commercial activities, according to residents of the area. Middle Formative residential clusters are found around four separate lagunetas in the Joyas district. Some residences were built on low mounds, but others were located on the apparently unmodified tops of the natural ridges. Surface collections show low density occupation over more than 100 ha around the Joyas Group 1 mound.

The Esquivel Group lies 1 km south of Mound 1, in an area devastated by the road construction of 1972. Three low (residential) mounds were recorded in 1983 and labeled the Southwest Group (Love 2002a: fig. 14), but many others were destroyed by the road. Edwin Shook (n.d.) recovered domestic debris from his excavations in this group. These remains came from small mounds clustered around lagunetas that he took to be borrow pits but that are, more likely, oxbows of the ancient river course. Auger cores taken by Hector Neff (2005) showed extensive Middle Formative period deposits in this sector, beneath Late Classic occupation. A low, broad platform 3 m in height lies south of the modern road, but its date of construction is uncertain.

The Vacas Group was originally designated as a separate site (SM-187) during survey (Love 2002a: 52), but more recent intensive surface collections show that occupation was continuous between that group and the site core. Six low mounds were recorded in 1985, but modern residents reported to survey crews that others had been destroyed. These same residents reported that an even larger mound, several meters in height, had also been leveled, presumably during road construction in 1972. Beyond these four primary districts, other smaller residential clusters or neighborhoods were located around Lagunetas 1, 2, and 3. Further east, beyond the limits of the site map in Figure 7.2, there are additional residential remains (Love 2002a). The estimate of 300 ha for La Blanca is therefore a minimum.

Hierarchy and Heterarchy at La Blanca

The monumental core of La Blanca was well organized and seemingly constructed as an integrated group to present both an ideological message and to function as the location of large public rituals (Love 2016b; Love and Guernsey 2011). The Great Plaza, covering approximately 9.3 ha from Mound 1 to Laguneta 3, could have easily held a crowd of 10,000 people and a densely packed crowd could have reached over 20,000 people (Love 2016b). In other words, the plaza was large enough to accommodate all of the population in the environs of La Blanca, and perhaps all living in its polity. The precise size of such rituals is impossible to know, but the message was clear: the city of La Blanca had been built on a monumental, and locally unprecedented, scale.

Traditionally, monumental works have been seen as an overt expression of power relationships (e.g., Trigger 1990). After their construction they served as continual reminders of power by modifying daily social practices (Joyce 2004b; Love 1999a). Monumental works also may have served as venues for ritual expressions of power relationships and related ideologies (Guernsey 2003, 2006, 2012; Reilly 1999). First generation monuments carry special importance because they are often excessive expressions of all the economic, social, and ideological changes that accompany the development of social complexity (Chang 1974; Trigger 1990). However, recent approaches to monumentality have provided a counterpoint, emphasizing that monumentality may be undertaken as a communal act, not necessarily motivated by assertions of power by ruling elites or, in other cases, orchestrated in concert with elite assertions of authority. That is, monumentality may be the product of heterarchy as much as hierarchy. In this view, coordinated groups, with or without a centralized government or authority, may build works that rival those of state-level societies (Burger and Salazar 2012; Rosenswig and Burger 2012; Sassaman and Randall 2012).

Love (2016b) proposed that Mound 1 was constructed as a symbolic residence for the ancestors of the new community formed by the creation of La Blanca. In this view, the pyramid/temple represented a metaphorical mountain where, much as in some modern Mesoamerican communities still to this today, the spirits of ancestors were believed to dwell (Vogt 1964). The coming together of ancestral spirits mirrored the coming together of the different groups that aggregated to build La Blanca and likely created a sense of fictional kinship between them. Archaeologically, this is attested by the evidence of dedication rituals in the South Plaza, which appear to have replicated domestic dedication rituals but at a much grander and more public scale (Love 2016b). So, too, Guernsey (2020) has argued that the fill of Massive Mound 1, which contained hundreds of hand-modeled, ceramic figurine fragments as well as other domestic detritus (Love and Guernsey 2011), also points to a form of

community engagement (also see Blomster 2009). The figurine fragments, which likely came from many different households, may have symbolically represented the people who had used them. But, despite what may be taken to be evidence of community engagement and attempts to construct a shared identity, power relationships were also clearly expressed, most obviously in the form of La Blanca's monumental architecture. That is, metaphors of family and assertions of real and/or imagined kinship may have been invoked, but there was a *pater familias* firmly in charge.

The three outlying districts (Joyas, Esquivel, and Vacas) also appear to have had "public" architecture in the form of pyramidal mounds or low broad platforms at which rituals were conducted, although perhaps only for the residents of those neighborhoods. While it may be overly mechanistic to refer to these shrines or temples as "low-level integrative facilities" (following Adler et al. 1989), indications are that they served groups smaller than the entire community and stood in marked contrast to the more monumental "high-level integrative facilities" found at the site core. It is tempting, but unprovable at the moment, to think that these outlying neighborhoods correspond in some way to the communities that migrated to the La Blanca area at the time of the city's foundation. Even with that caveat, it is plausible that some form of identity based upon districts and neighborhoods existed at La Blanca.

Archaeological evidence suggests that, at La Blanca, there were both hierarchical and heterarchical forces at play in the construction of its urban center. Elite attempts during the Conchas phase to promote a communal identity, with themselves as leaders of this extended "family" or community, were an incomplete success. Elites situated themselves as essential to the maintenance of social order through their proximity to the symbolic mountain of the ancestors, and through the use of sculptural forms that both spoke to their abilities to communicate with the Otherworld and linked them to elite expressions of authority mirrored at other Middle Formative sites in Mesoamerica (Guernsey 2010a; Love and Guernsey 2007). But, in spite of such assertions, their powers may, in fact, have been fragile. Fragility is typical of early cities and states. A model may be found in the Early Dynastic period of Sumeria where, according to Yoffee (2005), older tribal-based institutions of government endured after the first appearance of kings. Institutions such as family councils and village-based judges continued to hold considerable power and the institution of kingship merely floated above them. Simply put, evidence suggests that the rulers of early complex societies, in both Sumeria and Mesoamerica, were not as powerful as their monuments proclaimed them to be.

Despite the labor invested in creating a stage for public ritual, it is evident that the household and, presumably, the kinship structures associated with it, featured prominently in formulations of identity at Middle Formative La Blanca across a spectrum of scales. The best evidence for this lies in household

rituals at La Blanca that show evidence for feasting and probably also the veneration of ancestors (Love and Guernsey 2011). These domestic rituals served as a counterpoint to the messages encoded in public rituals. In what were ostensibly private contexts, rituals reinforced identification with ancestral kin and possibly ancestors specific to individual households, rather than the generalized or more encompassing idea of ancestral community signified by Mound 1. As the locus of most daily activity, the focal point of socialization, and the primary economic unit of individual lives, the household would have been the most important unit in La Blanca society. Yet, at the secondary center of Cuauhtémoc, the pattern is different. Based on comparisons between refuse recovered from a 25 m-long elite residential platform at Cuauhtémoc and other village-wide middens, Rosenswig (2007) argues that feasts were sponsored in public contexts to ease community tensions arising from increased economic stratification during the Conchas phase. Social differentiation had been well established during the preceding Jocotal phase, but increased economic differentiation and newly established exploitive relations surely had the potential to cause conflict as the long-established community at Cuauhtémoc was incorporated into the La Blanca polity. Elite sponsored feasts would have served an integrative function.

HIERARCHY AND ECONOMY DURING THE CONCHAS PHASE

One of the most salient social traits of urban society is economic stratification. During the first half of the Early Formative period at Paso de la Amada, data show a lack of quantitative economic differentiation between households (Lesure and Blake 2002). There are few differences in the quantity of prestige goods between households in their artifact assemblages or in terms of faunal remains. Size of architectural mound platforms is the only criterion that differentiates high-ranking from lower-ranking social groups. In contrast, domestic data from Middle Formative La Blanca show significant economic differentiation at the household level. Elite households contain much higher densities of prestige goods, with jade being the single most secure indicator of household wealth (Love and Guernsey 2011). Additional, but less robust, discriminators are the quantities of mica jewelry and fine paste ceramics, the latter often being decorated with elaborate iconography. At Cuauhtémoc, fine paste ceramics are documented only from the elite sector of the site. Other differences between La Blanca and Cuauhtémoc are equally revealing: markers of rank, such as large, decorated ear spools, are found only at the capital whereas smaller, plain ear spools are the only type recovered from Cuauhtémoc, even from elite contexts (Rosenwig 2010, 2012).

These household data show that it was during the early Middle Formative period, in this region of Mesoamerica, that social ranking began to be

determined based upon the production and control of material wealth. That is, during the Early Formative period, in the Soconusco, there is evidence of rank based upon the size of house mounds and, perhaps, the ability to mobilize labor. But, by early Middle Formative times, social standing was based more firmly on control of the means of economic production – probably land – which resulted in wealth differentials.

La Blanca's Hinterland: Secondary Centers and Monumentality

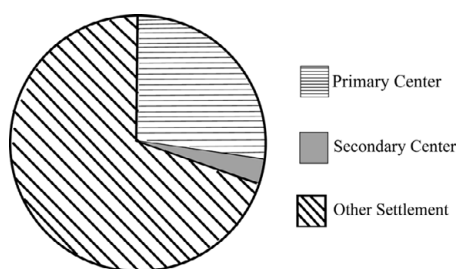
During the Conchas phase, monumental architecture moved beyond the regional capital. The presence of large pyramidal mounds over 15 m in height was the criteria by which Love (2002a) defined secondary centers at La Zarca and El Infierno. Rosenswig (2010) defined another group of sites with smaller pyramidal mounds as possible secondary or tertiary centers. The best known of these settlements is Cuauhtémoc.

The secondary centers of La Zarca and El Infierno have single pyramidal temples over 15 m in height and small residential zones associated with them. La Zarca's overall Conchas phase population is masked by an intense Late Postclassic occupation, but it probably held no more than ten to fifteen residential mounds in the area immediately around its pyramidal mound. Problems also exist in determining the population at El Infierno because of sediments deposited by flooding. Nonetheless, an estimate of ten to fifteen residential mounds would be generous, with each site under 10 ha in extent.

West of the Río Suchiate, which forms the boundary between Mexico and Guatemala, Rosenswig's survey located a number of settlements with small public mounds. Cuauhtémoc, the largest of these, covered 10 ha and had three large mounds: one 3 m high, one 5 m high, and one platform that measured approximately 25 m in length by 1 m in height. This last platform formed the elite precinct where evidence of feasting is documented, as described previously. The settlement tier represented by Cuauhtémoc has a smaller central pyramidal mound than those represented by El Infierno and La Zarca, but a larger zone of habitation. Lacking any consistent hierarchical distinctions between them, we combine these settlements into a single category of "secondary centers."

Distribution of Population

Overall, the aggregation of population during the Conchas phase took place between the Río Coatán and the Zanjón Pacaya stream that flows into the coastal estuary, but it was especially intense at the La Blanca capital. Within the 300 km² of intensive survey by the Río Naranjo Project, Love (2002a) recorded fifty-six Conchas phase localities. Within the 28 ha of intensive



7.3. Distribution of population across settlement types during the Conchas phase in Río Naranjo and El Ujuxte survey zones. Chart by Love

survey conducted by Rosenswig (2008), two dozen additional sites were located. These latter settlements have a combined area of approximately 17 ha and likely accounted for 62 percent of the zone's population. Subsequent efforts by Rosenswig expanded the extent of his intensive survey zone to cover 70 km², and relative levels of Conchas-phase population remained the same (Rosenwig et al. 2013).

We have converted Love's population estimates for the Río Naranjo district to hectares of occupation, and combined them with Rosenswig's initial survey data for the Cuauhtémoc survey zone (Fig. 7.3). The combined data suggest that the capital (La Blanca) held approximately 39 percent of the regional population, secondary centers (combined) held approximately 8 percent, and other localities were home to approximately 54 percent. Although there was a very top-heavy distribution, the majority of the people of the La Blanca polity, nevertheless, lived in the hinterland. Secondary centers, even those with very large ceremonial structures, held populations that were no larger than most villages without such monumentality.

MIDDLE TO LATE FORMATIVE PERIOD URBANISM

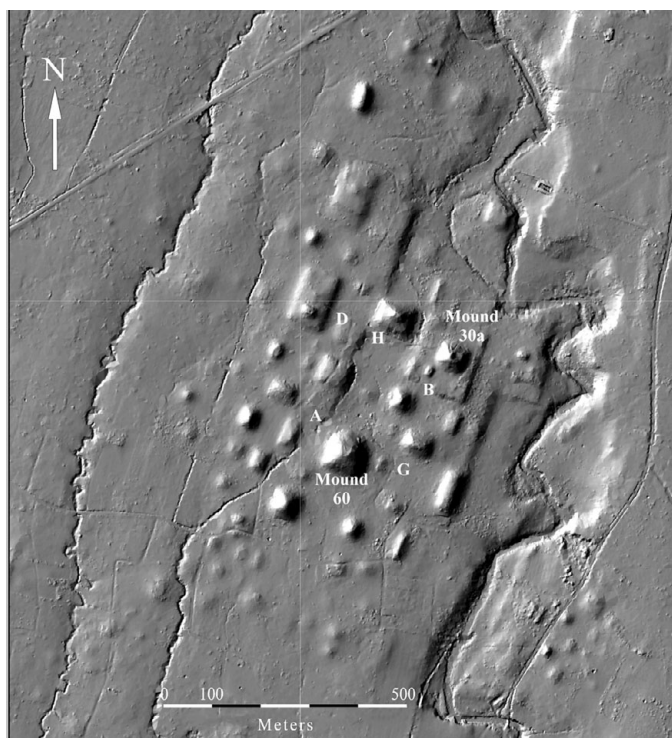
After the Conchas phase, the La Blanca capital declined dramatically and was reduced to a small village of about 20 ha. Similarly, there was a dramatic decline in population in the surrounding area. Soon after, two new regional centers emerged: El Ujuxte, located in the former hinterland of Middle Formative period La Blanca, and Izapa, which was situated on the piedmont approximately 30 km away (Fig. 7.1). Both centers display new forms of urbanism and political integration, and each was the capital of a polity more complex than that of La Blanca.

The Late Formative (ca 300 BCE–250 CE) was a time of peak urbanism throughout the Pacific coastal plain and piedmont. It was also a time of early state formation, as evidenced by well-defined and complex regional settlement hierarchies that reflect the growth of bureaucratic and entrenched governmental regimes. Moreover, the economy and ritual both became more centralized and controlled by the elite. Urban forms reflected these changes, with greater formalism in site planning and denser concentrations of people. The formalism of city organization extended beyond the capital cities, with secondary centers emulating the site plans of their capitals. Finally, although the percentage of the population in capitals declined, there was a continued nucleation of population.

The Izapa Capital

Izapa (Fig. 7.4) has a long history of occupation, but it was by 600 BCE during the Escalón (700–500 BCE) and Frontera (500–300 BCE) phases that the site clearly reached urban proportions (Clark and Lee 2013; Lowe et al. 1982; Rosenswig 2019; Rosenswig et al. 2018). During the Guillen phase (300–100 BCE), Izapa reached the height of its power and this is when hundreds of stone sculptures and dozens of carved stelae (for which the site is famous) were erected (see Guernsey and Strauss, Chapter 9, Fig. 9.10; also see Guernsey 2006, 2020; Lowe et al. 1982; Norman 1973, 1976; Rosenswig and Guernsey 2018).

Izapa's architecture was remapped by the Izapa Regional Settlement Project (IRSP) using lidar technology that revealed previously unrecognized features and determined the site's limits. Newly identified archaeological features within the site include a formal plaza with a series of terraces along the Río Izapa and an E Group at the south edge of the monumental core (Rosenwig 2019; Rosenswig et al. 2013). Pedestrian survey documented the full extent of Izapa's occupation beyond the limits of what was recorded by the New World Archaeological Foundation (NWAf) in the 1960s (Lowe et al. 1982). Very minor occupation is evident during the Conchas phase. The Duende phase



7.4. Lidar image of Izapa center, with letters indicating mound groups. Courtesy of the Izapa Regional Settlement project

(800–700 BCE) was when the first conical mound, measuring 12 m in height, was built at Izapa (Lowe et al. 1982, 2013). The recent IRSP survey results are consistent with the earlier NWAf excavations, which determined that a large community was first established between 800–600 BCE. The Escalón phase was when Izapa’s occupation reached its greatest documented extent with surface evidence spread over 226 ha (Rosenswig 2019).

Carrying on the tradition evident at La Blanca, and across Mesoamerica by the latter part of the Middle Formative period, a large pyramid, Mound 60, provided the political-religious focal point for the monumental core of Izapa. Another large conical mound, Mound 30a at Izapa was constructed on an enormous platform not at the center of the site, but instead further to the northeast. The mounds that bound three large plazas extending to the south were massive and reached heights of between 12 m and 22 m. In contrast to La Blanca, which was oriented to the Tajumulco volcano in Guatemala, Izapa was oriented to the larger Tacaná volcano (18 degrees east of north). Nevertheless, the perpendicular axis of Izapa was oriented to the winter solstice sunrise over the Tajumulco volcano (Blake et al. 2015).

Izapa’s monumental core was designed as a locale for political theatre already by the Escalón phase, with efforts to do so concentrated around Mound 30a and in Group B at the site (Ekholm 1969). Mound 30a and the south side of its platform created a venue in which rituals were likely performed, visible to audiences assembled in the large plaza to the south (Fig. 7.4) (Rosenswig and López-Torrijos 2018). Three to five small architectural features were built on the southern edges of the platform, and this novel architectural configuration would have been visible from most mounds and plazas at Izapa at this time. Likewise, at this juncture during the late Middle Formative period, the Tacaná volcano would have framed Mound 30a. Therefore, any rituals conducted on the platform would have been framed in the foreground by Mound 30a and, in the background, by the looming silhouette of Tacaná. Ceremonies conducted in this space were, in other words, framed by both cultural and natural, geographic features. This “theatrical” architectural configuration was replicated at all second and third tier centers in the Izapa polity (Rosenswig and López-Torrijos 2018; Rosenswig et al. 2015b). As Lowe et al. (1982: fig. 4.5) demonstrated, Tacaná remained significant to the urban design of Izapa for centuries.

During the Late Formative Guillén phase, Group A and other plazas were built to the west of Izapa’s original north–south alignment (Lowe et al. 1982: 159–167). The significance of this development is worth noting: during the Middle Formative Escalón and Frontera phases, Izapa was laid out in the same way as its lower order centers. However, once new architecture was built to expand the site to the west during the Late Formative Guillén phase, Izapa became architecturally differentiated from lower order centers. Underscoring

these differences, as well, was the sheer size of Izapa's monumental core as well as its extensive corpus of carved stone monuments.

During the Istapa and Jaritas phases (CE 100–400), the monumental center of the site shifted north to Group F in upper Izapa. Lidar mapping has enabled us to recognize a 270 m long causeway leading south towards lower Izapa, which terminated at a small platform with a mound on top (Rosenswig and Mendelsohn 2016). This was also the time when the Mound 30 platform was extended by 100 m to the north (Rosenswig et al. 2018). Izapa's occupation during the Common Era was also when monuments were reset at Group F and at Mound 9. Mound 9 and the back of the Mound 30 platform would have been the entranceway to what, by that time, would have been considered “Old Izapa.” But “Old Izapa” was still a destination: at least thirty-three caches and multiple burials were interred within lower Izapa during the Terminal Formative period (Clark and Lee 2013; Lowe et al. 1982; Lieske 2018). Izapa thus continued to be a significant urban center after its Formative-period glory, with ongoing monumental construction at Group F throughout the first millennium CE (Rosenswig and Mendelsohn 2016).

The El Ujuxte Capital

El Ujuxte, located on the coastal plain just 13 km east of La Blanca, was founded as a new center ca. 500 BCE and reached its peak during the Pitahaya and Sierra phases (100 BCE–200 CE). The core of El Ujuxte is similar to Izapa, with a central platform (the Mound 2 platform) supporting a tall mound on its north side and a large pyramidal mound to the west of the platform (Mound 1) (Fig. 7.5). Also like Izapa, El Ujuxte has a series of plaza groups surrounding the central complex, each formed by low (3–4 m tall) mounds, built on the same axis as the Central Group. A difference lies in the arrangement of structures atop the Mound 2 platform. Unlike Izapa, the axis of the central platform does not align with a volcano, but may instead align with the point on the horizon that marks the rising of the bright star Capella (Poe 2000). While at first glance both cities employed similar overall architectural designs, including the use of plazas and central mounds to create cultural spaces and focus attention, the details of Izapa and El Ujuxte's architectural programs are actually quite different. We take this to reflect distinct rituals and traditions that were formalized architecturally at the two neighboring cities. As these differences were replicated at secondary and tertiary centers, each polity can be identified by its distinctive architectural arrangement. Another important difference between the two capital cities was that Izapa's plazas were lined with dozens of carved stelae depicting politico-religious themes (as well as a variety of other carved and uncarved monuments), while those at El Ujuxte were, for the most part, not. Monuments at El Ujuxte, with the exception of



7.5. Map of the central zone of El Ujuxte. Map by Love

two small potbelly sculptures (Love 2010: fig. 7.21), consist of three uncarved stone altars.

El Ujuxte was built as a planned city sometime after the decline of La Blanca. Chronological uncertainty due to the flat calibration curve ca. 700–400 BCE makes it possible that there was a gap of some 100–200 years between the fall of La Blanca and the foundation of El Ujuxte; it is also possible that, during this same time frame, some people relocated from La Blanca to Escalón- and Frontera-phase settlements associated with the nearby, and also burgeoning, Izapa polity. Another possibility is that we have not recognized an occupation during this 100–200-year gap at one of the sites with monumental architecture near El Ujuxte, such as Carrizal.

Major constructions at El Ujuxte have not been excavated as extensively as those of Izapa, but evidence from the Central Plaza shows that building there began during the Caramelo phase, ca. 500 BCE. Primary deposits dating to the Caramelo phase have been found in only two of the sixteen residential areas

tested, which suggests that the overall size of the site between 500–300 BCE may not have been terribly large. The differences between the Caramelo and Cataluña (300–100 BCE) phases is based on the relative frequencies of ceramic wares, so surface remains cannot be unambiguously attributed to the Caramelo phase. Hence, a secure estimate of the site size during the late Middle Formative cannot be formulated at the present time.

By the Cataluña phase, El Ujuxte consisted of a nuclear zone covering at least 4 km², and surface remains indicate that extended habitation zones covered over 6 km². If we include the mound group at the site of Valle Lirio, where the major architectural alignments at El Ujuxte have their vertex, the total area for the El Ujuxte site may have exceeded 8 km². Within this area are over 250 mapped mounds; many more, both large and small, were left unmapped due to lack of permission from landowners.

Unlike Izapa, at El Ujuxte the startlingly axial urban grid of the central zone was extended to residential areas, influencing daily life throughout the city (Love 1999a). With the exception of the Chabela Group, all buildings at the site, both public and residential, share the same orientation with their longer axes on an azimuth of 35 degrees east of magnetic north. Burials were also aligned with the site grid, although the orientation of the head of decedents may be toward any one of the four grid directions. Major streets in the city ran perpendicular to the primary axis (Love 2016a; Poe 2000).

The alignment of Mound 1 to the summit of Mound 2a coincides with the summer solstice sunrise over the volcano Santa María, one of the peaks in the chain of volcanos that also includes Tacaná and Tajumulco. Other alignments at El Ujuxte mark the zenith passage sunrise, winter solstice, and the rising of the Pleiades (Poe 2000). The ceremonial core of the site, then, marks important passages of the sun, including both the 260-day zenith passage cycle and the 365-day solar year. These alignments are shared with other cities throughout Mesoamerica, including Teotihuacan (Sugiyama, Chapter 8), and reflect a growing body of astronomical and calendrical knowledge shared by elites throughout Mesoamerica during this era (also see chapters in this volume by Arroyo, Canuto and Estrada-Belli, and Stanton and Collins).

The Chabela group of El Ujuxte, located northwest of the Mound 2 platform, has a distinct alignment of 89 degrees east of magnetic north, which coincides with the rising of the constellation Gemini on the northern horizon. The significance of this event is uncertain, other than the fact that the rising of Gemini occurs just before sunrise, immediately preceding the rising of Orion. More significantly, the main site axis and the axis of the Chabela Group intersect at the principal mound of the Valle Lirio group, some 2.5 km south of Mound 2 along this same central axis. The converging alignments attest to a considerable amount of engineering skill as well as astronomical knowledge. Similar levels of skill and knowledge are evident at Izapa, but the alignments

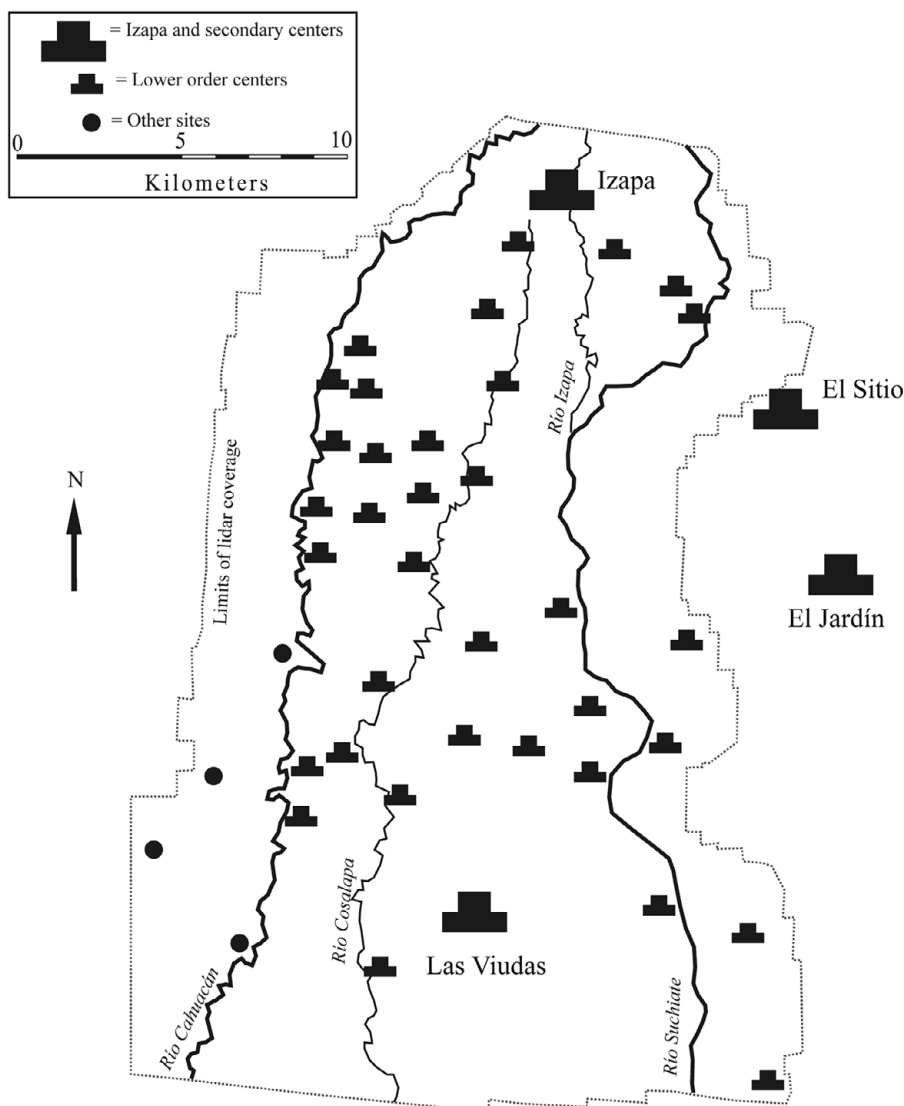
are different. As with differences between the two centers' architectural features and arrangements, so too their geographical and astronomical orientations differ. Michael Blake (2013) recognized that many sites throughout Mesoamerica demonstrate that a visual alignment between architecture and a significant geographic feature, such as a volcano, was critical to establish, with horizon phenomena alignments playing a particularly significant role in urban planning.

El Ujuxte's ceremonial core resembles that of the Izapa polity in general terms, but with significant differences. These differences might be viewed productively as variations on an overarching theme, which emphasized participation in a shared culture of symbolic expression and, perhaps, similar principles concerning the assertion of political power and regional authority. At the very least, patterns of architecture, combined with evidence of religious rituals, demonstrate participation in a widespread network of elite identity and ritual structure that encompassed much of eastern Mesoamerica (Guernsey and Love 2005; Guernsey and Strauss, Chapter 9). The use of the same political "grammar," leavened with different "words," suggests that individual polities employed a shared suite of elite and specialist knowledge, but modified it to suit their own particular agendas.

URBANISM BEYOND THE CAPITALS

The Izapa Polity

Rank size analysis of the cities in the Izapa polity indicates that there was a four-tiered hierarchy of political centers (detailed in Rosenswig and López-Torrijos 2018, and based on an analysis of architectural forms employed in conjunction with site size ranking) (Fig. 7.6). This internal political hierarchy of the Izapa polity was expressed architecturally at each center. At the apex of this hierarchy was the Izapa capital itself, which was the largest city, with the most mounds, and the only center with an array of stone stelae, altars, and thrones. The blend of history and mythology commemorated in stone and publicly displayed was unique to the capital (see Guernsey 2010a, 2020; Guernsey and Strauss, Chapter 9; Love 2010; Rosenswig 2019). Second-tier centers, including Las Viudas, El Jardín, and El Sitio, can also be identified based on their rank size. Both first- and second-tier centers each have between three and four plazas as well as at least one ballcourt and E Group. These architectural features indicate that a similar range of public ritual was undertaken as at the larger centers. Recent Ground Penetrating Radar and magnetometer survey at Las Viudas, the second largest site within the Izapa polity, documented only a limited number of stone monuments whose form will need to be documented by future excavation. Las Viudas was thus qualitatively different than Izapa, with its hundreds of stone monuments, in terms of the



7.6. Map of Izapa polity with monumental centers labeled. Map by Rosenswig

political narratives presented through the venue of public art. The location of secondary centers was also significant, as they created a perimeter around smaller centers and much of the polity's population. The defensive arrangement of secondary centers along only the southern and eastern edges of the greater Izapa polity presumably indicates the need to establish territorial boundaries with the neighboring El Ujuxte and Tak'alik Ab'aj polities. Overall, the area defined by Izapa and its secondary centers covered a territory of approximately 500 km².

Third and fourth tier centers were smaller, and their architecture suggests a narrower range of ritual activities. Third tier centers possess a platform that

created a stage on the south side of the northern pyramid mound, and have one or sometimes two plazas aligned to the south-southwest. At larger third-tier centers, the three architectural features are discernable around the stage below the northern mound, which suggests that public rituals, like those at Izapa proper, were visually framed by each site's northern mound and a volcano on the horizon; this layout was replicated even at smaller third-tier centers. Fourth-tier centers have at least four mounds forming one plaza, but no platform. Although these smallest centers created a culturally defined space oriented in the same directions as higher-order centers, they lacked the architecture associated with more formalized rituals. Missing, to date, from settlement pattern results are the smallest hamlets, which possessed no plazas formalized with earthen architecture. Including such small communities would, however, provide a fifth level of settlement type within the Izapa polity.

The El Ujuxte Polity

The El Ujuxte polity was both larger and more complex than the Middle Preclassic La Blanca polity (Fig. 7.7). It covered approximately 600 km², stretching from the Río Naranjo to somewhere between the Río Ocosito



7.7. Map of sites in the El Ujuxte polity. Map by Love

and the Río Samalá. The polity also encompassed at least five levels. El Ujuxte itself covered over 6 km² with at least 250 visible structures. The second tier consisted of at least four centers, each of which covered over 1 km². Each of the secondary centers had public architecture that copied that of El Ujuxte. The largest of the secondary centers, Carrizal, included a central complex that replicated precisely the El Ujuxte pattern of an acropolis surmounted by seven mounds with its larger mound to the west. Encuentros also possessed this type of central complex, but its residential zone has not been intensively surveyed due to problems of access. The remaining secondary centers likewise possessed an acropolis with seven mounds but lacked the large pyramid to the west. Tertiary centers had either a single large mound (approximately 10 m in height) or two large mounds at opposite ends of a plaza, aligned roughly north to south. The fourth and fifth levels of the hierarchy consisted of large and small villages without public architecture (Love 2016a).

The size and complexity of El Ujuxte's secondary centers show them to be significant administrative centers, while the replication of El Ujuxte's acropolis plan at the secondary centers demonstrates that they were incorporated into the larger political system of the capital, much as in the Izapa polity. To date, none of El Ujuxte's secondary centers has been excavated, so there are no data regarding the economic relationship between the capital and its subsidiary cities. There are, however, good data from domestic excavations at El Ujuxte that shed light on the economic and ideological systems that formed the basis of its power (Love 2016a).

URBANISM AS THE NORM

Estimates of population from the Pacific Coast and piedmont show significant increases from the Middle Formative to the Late Formative period. In the Río Naranjo survey zone, the estimated number of total residences, defined by low mounds, rose from 256 in the Middle Formative to 730 in the Late Formative. Settlement area increased from an estimated 750 ha in the Conchas phase to 2300 in the Pitahaya and Sierra phases. In relative terms, the two measures of population growth are quite close, and averaged estimates suggest that the population tripled from 600 BCE to CE 100. Equally breathtaking, however, is the extent to which this population nucleated into larger settlements.

The size and complexity of the regional systems are the most important factors in defining the Izapa and El Ujuxte polities as states. But these same measures also reveal the extent to which urbanism developed not only in the capitals, but also throughout the borderland regions of the polities. At both Izapa and El Ujuxte, the secondary centers were of significant size and should be considered cities.

Only one of El Ujuxte's secondary centers, Carrizal (called Chiquirines Viejo in previous publications), has been mapped beyond the central group

along with systematic surface collections of its residential mounds (Fig. 7.7) (Rush 2000). Small test pits were made by Ed Shook at El Jobo, El Sitio, and El Jardín – all centers within the larger Izapa polity – but these data have not been reported in detail.² Nonetheless, survey data are conclusive in showing that the secondary centers of both polities were of an arguably urban scale. In this sense, our data sets are remarkably complementary. The lidar and pedestrian surveys done by the Izapa Regional Settlement Project show the scope of that city's regional polity and the scale of monumental construction from the Río Cahuacán in Chiapas to approximately the midway point between the Suchiate and Naranjo rivers in Guatemala (Rosenswig et al. 2013, 2015b; Rosenswig and López-Torrijos 2018). Intensive pedestrian survey by the Río Naranjo project and mapping of secondary centers by the El Ujuxte project provide house mound counts for several urban clusters in and around secondary centers east of the Río Suchiate.

The urban extent of Carrizal, the largest of the secondary cities in the El Ujuxte polity whose center mirrored that of El Ujuxte but at a smaller scale, included tightly clustered residential mounds covering over 1 km². The El Ujuxte project was able to map and make collections from nearly 100 residential mounds at Carrizal but could not obtain access to fully map large portions of the residential parts of the site. However, the visible area of residential mounds beyond the mapped area is easily equal to the mapped portion of the site, extending to the west for at least 500 m as well as to east of the Zanjón Pacaya stream for the same distance. A total of 100 hectares that held 200 residential mounds would be a minimal estimate of the size and population of Carrizal.

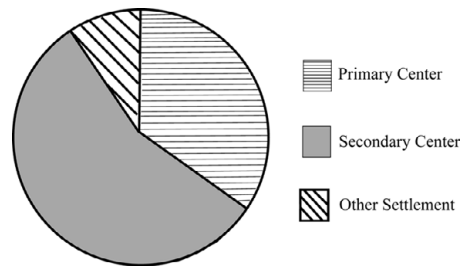
Other dispersed urban zones are evident around the sites of Los Cerritos, Laureles, and Sowa, which also likely formed part of the larger El Ujuxte polity. The core of Los Cerritos, much like La Blanca, was largely destroyed by road construction in 1972; however, extensive habitation areas survived that carnage. Although the scale of monumental construction at Los Cerritos is not documented, long-term residents of the modern town are consistent in saying that there was a pyramidal mound over 10 m in height prior to construction of the road. One informant stated that the tall mound was on a platform that held additional low mounds. These tales are supported by dense and extensive Late Formative materials in the Los Cerritos zone, which indicate the strong possibility that, indeed, a large structure was destroyed.

Intensive pedestrian survey also shows uninterrupted Late Formative habitation from the Salinas Tilapa to the tertiary center of Salinas II (which possesses two conical mounds), and indicates that this zone represented a dispersed urban settlement centered on the Los Cerritos urban complex.

² In the Izapa polity, the third-tier center of Don Hermelindo had seven test units excavated in 2012, but these data are not yet published.

Similarly, Laureles, first described by Coe and Flannery (1967) and subsequently surveyed by Love in 1983–1985, contains two mounds 5–6 m in height and is located within one km of Los Cerritos, suggesting that it, too, was functionally integrated both with Los Cerritos and the greater El Ujuxte polity. A third center, Blanquita, lies just north of Salinas II, and has a single conical mound 10 m in height. The architectural complex at Sowa includes a seven-mound platform, but lacks the larger western structure found at Carrizal and El Ujuxte. A tertiary center with a single conical mound (approximately 6 m in height) lies 1 km north of Sowa, and may best be considered part of the larger Sowa urban zone.

The distribution of population east of the Río Suchiate by settlement type is shown in Figure 7.8. It is remarkable that, within the area of intensive survey, over 80 percent of the population during the Late/Terminal Formative resided in an urban environment, whether that of a primary or a secondary center. This heavy concentration of population, relative to that of the Middle Formative period, indicates a significant transformation in social relationships.



7.8. Distribution of population across settlement types during the Late Formative in Río Naranjo and El Ujuxte survey zones. Chart by Love

ECONOMY, RITUAL, AND URBANISM

The early states that took shape at Izapa and El Ujuxte were, in part, an outgrowth of the La Blanca polity and the economic changes that took place there, as already detailed. Love (2002b) viewed this Middle to Late Formative transition as an episode of political cycling, in which centralized power had to be re-established, in an altered form, following the collapse of the La Blanca polity. Elites seeking power consciously modified aspects of the previous system in order to enhance their power and make it more enduring. In the process, they created both economic and ideological institutions that gave rise to an early state form of administration. We view the aggregation of population at these Late Formative settlements and the increasingly rigid form of the urban centers themselves as indicative of a more highly regimented political and economic system with increased control by the elite. These cities were both economic centers as well as places of political power and religious activity. We agree with other contributors to this volume that religion and the creation of sacred spaces were important to the foundation of early cities in Mesoamerica. But we maintain that examination of these cultural expressions is not sufficient for understanding the full extent of the attractive forces that drew people to such places.

Ideology, Art, and Ritual

The Guillén phase (300–100 BCE) was the apogee of Izapa's Formative period occupation and the city at that time was the urban capital of a powerful polity. This was also when Izapa's famous stone stelae, altars, and thrones were carved (Clark and Moreno 2007; Guernsey 2006, 2011, 2020; Rosenswig 2019). The imagery on stelae at Izapa, some of the most extensive and complex of any Mesoamerican city of the time, includes scenes of multiple individuals engaged in a range of ritual activities. Other stelae depict a single dominant figure (presumably a ruler) dressed up as a god or other supernatural character (see Guernsey and Strauss, Chapter 9, Fig. 9.3). Such imagery drew on earlier Middle Formative iconographic programs that highlighted the supernatural capabilities of rulers as a premise for their political authority. References to water, aquatic life, and canoe travel also appear and engage with ideas both ideological (the ruler as provider of rain) and economic (Guernsey 2016). In fact, Izapa's most elaborate stone carving, Stela 5 (Clark and Moreno 2007: fig. 13.7; Guernsey 2006: 123–124; Norman 1973, 1976), depicts an elaborate pantheon of mythohistorical figures set in a scene laden with ideological references concerning kingship and the supernatural realm. Taken together, the forty or so carved low-relief stelae that are well preserved from Izapa constitute one of the most elaborate programs of politico-religious art known from Mesoamerica.

Ideological change in the Late Formative was most conspicuously manifested in such sculptural programming at Izapa. But, at a city like El Ujuxte, similar premises were articulated through the formal arrangement of the site core and in deposits of ritual caches that sanctified these new urban spaces. Such changes were not limited to the ritual center of the site, however, but reflected throughout the habitational zone of the city. Archaeological evidence makes clear that there was both a dramatic reduction in household ritual and, concomitantly, a rise in public ritual at specific locations including the Mound 2 platform and the Central Plaza.

During Middle Formative times at La Blanca, several classes of material were linked to household ritual: ceramic figurines, altars, censers, and feasting vessels. Yet comparable forms of household ritual suffered a dramatic decline at Late Formative period El Ujuxte. Some numbers illustrate this. To date, over 5,000 hand-modeled, ceramic figurines (overwhelmingly fragmentary) have been recovered at La Blanca. The frequency of figurine heads per cubic meter of excavation ranges from 1.4 to 3.9, depending on the household and the subphase, which indicates that the use of small ceramic figurines was a frequent aspect of daily ritual at La Blanca. At El Ujuxte, however, their frequency is about 0.02 fragments of all figurine parts (heads and bodies) per cubic meter of excavation, with most of the nineteen figurine fragments

recovered coming from Caramelo phase deposits. Clearly, a dramatic change took place (see Guernsey 2020 for further discussion).

Another comparison between Middle Formative La Blanca and Late Formative El Ujuxte underscores the extent of these changes. At La Blanca, feasting vessels, defined as the elaborately decorated Cuca Red on Buff bowls (Love 2002a; Love and Guernsey 2011), were found in all households, although faunal remains suggest that different types of feasts may have been held in elite residences. Evidence from Cuauhtémoc (Rosenswig 2007) shows a similar pattern. At El Ujuxte, however, the frequency of feasting vessels is strongly correlated with household rank (Love 2016a), which suggests that, by the Late Formative, feasting became largely restricted to elite households. To be clear, it did not disappear from lesser ranked households, but it became more restricted.

At the same time that these two important aspects of household ritual were reduced, ritual in the public sectors of El Ujuxte was transformed. Two lines of evidence support this assertion. First, the formality of architectural arrangements in the core of El Ujuxte is striking, and the large plazas fronting the stage-like Mound 2 platform suggest a concern with spaces for public spectacles that could accommodate large audiences. Second, the remains of specific dedicatory rites were found deposited in the Central Plaza, confirming the use of this space for ceremonial activity.

The remains of four floors, and hints of a fifth, were found during the Central Plaza excavations. Associated with each floor were offerings in the form of caches of ceramic vessels and other materials; the greatest number of offerings were associated with the Pitahaya phase renovation of the plaza. The offerings were placed along the east–west axis of the site, on the centerline of Mound 1. Within a 4 × 4 m exposure we recovered 131 vessels in 30 discrete caches (Love and Balcárcel 2000). The caches include pebbles of contrasting materials (igneous stone and pumice) that may have been used in divinatory rituals similar to those of modern-day ritual specialists (see Tedlock 1992), as well as stingray spines used for letting blood. Two caches, Features 27 and 28, each include numerous small dishes, three large bowls, and two ceramic crosses (Love 1999a). The cruciform shape of these objects is of particular interest. First, they mirror the axuality of the urban center's grid plan and, in fact, were cached along one of the main axes of the site. Their form – cruciform, but also identical to rectilinear quatrefoils that appear in the iconography of Izapa, Tak'alik Ab'aj, and throughout Mesoamerica during the Formative period (Guernsey 2010a; Guernsey and Love 2005) – alludes to the significance of quadripartite symbols as markers of places of emergence or supernatural access. But, more than that, the crosses, as quadripartite symbols, demonstrate that the elite of El Ujuxte were fully participatory in the sorts of elite rhetoric and conceptual exchanges that characterized much of Formative period

Mesoamerica not only along the Pacific Coast and piedmont, but throughout the Maya Lowlands and elsewhere (see Canuto and Estrada-Belli, [Chapter 4](#); Stanton and Collins, [Chapter 5](#)).

El Ujuxte lacks the massive stone sculptural programs of Izapa or Tak'alik Ab'aj. Nonetheless, the ritual caches, the site grid, and the astronomical alignments all suggest that the elite of El Ujuxte were concerned with articulating ideological statements comparable to those at other contemporaneous sites. But they did so through urban design, architectural expression, and ritual activities that included elaborate caching events (Guernsey and Love [2005](#)). Those rituals appear to have involved divination, blood sacrifice, offerings of food, and the use of a broadly shared vocabulary of quadripartite symbols. All of this evidence indicates that rites and “official” religious practices were usurped by the elite during the Late Preclassic and moved to the urban center; paralleling these transformations was a marked decline in household ritual. Rituals that, in the previous Middle Formative period, had transpired at many households were appropriated by the ruling elite at El Ujuxte and transformed into public spectacles in which an elite interpretation of ideology was presented (Love [1999a](#), [2002b](#); also see Guernsey [2012](#), [2020](#)).

Economy

A consideration of the economic implications of these transformations is also crucial, and data from El Ujuxte provide insight into these dynamics. Excavations in domestic zones at El Ujuxte indicate a decline in household autonomy from Middle to Late Formative times (Love [2002b](#), [2016a](#)) and, in particular, two lines of evidence suggest that elites gained increased control over key aspects of the subsistence economy by the Late Formative period.

Groundstone became increasingly important as the role of maize increased after 1000 BCE, and groundstone tools show a marked trend toward formalization, with increased labor input to manufacture formal tools. These groundstone tools can be divided into two broad classes: unmodified river cobbles, described as informal tools, and carefully shaped forms, such as manos and metates, described as formal tools. Formal groundstone tools are easier to hold, weigh less, and can be hafted for specialized tasks, and their implementation would reduce the processing time for preparation of maize flour from grain (Love [1999b](#)). In short, formal tools were more desirable, but required tremendous investment of labor to manufacture.

Elite residences at El Ujuxte have both a higher number of total stone tools per unit excavated than do nonelite residences and a higher ratio of formal tools to informal tools (Love [2016a](#)). There are also indications of manufacturing waste in one elite residence, Operation 17, during the Sierra Phase (100 BCE–100 CE). These data indicate that the elite at El Ujuxte were

controlling the manufacture and possibly the distribution of the formal tools. La Blanca, by contrast, which had much lower levels of formal groundstone tools, showed no such evidence of centralized exchange in subsistence technology.

An equally important, and related, economic activity was the storage of agricultural surpluses. The control of stored resources is an important source of economic power, as it is linked both to redistribution within the group and exchange of foodstuffs with outside groups. Large storage vessels were first developed during the Jocotal phase, increased in frequency during the Conchas phase at La Blanca, but became far more widespread in the Late Formative. These large capacity (100 L or more) vessels would have been ideal for storing grain. At El Ujuxte, the highest frequency of such vessels in surface collections occurs on the larger residential mounds near the center of the site and the frequency of storage vessels correlates well with the size of the house platform (Love 2016a). These vessels obviously could have been used to store many things, but maize seems the most likely candidate given its key role in the subsistence economy.

The density of botanical remains in elite residences further supports the idea that elites had some control over production and/or storage. In excavations at El Ujuxte, macrobotanical remains were collected both by flotation and manually in screens, and both measures indicate that elite residences had larger quantities of botanical remains, especially maize. To be specific, approximately 75 percent of the paleobotanical remains recovered at El Ujuxte (by weight) come from just three operations in elite residences.

In addition to controlling surplus food storage, the elite of the Late Formative also appear to have had greater control over exchange than was the case in the preceding Middle Formative period at La Blanca. From the excavated sample at El Ujuxte, we have evidence that elites had greater access to some imported goods, such as obsidian, a key material in all household production. Moreover, elite household obsidian tools also evidence less wear, indicating greater access to fresh blades. During the Formative period, obsidian was most likely exchanged in two forms: finished blades probably produced by specialists somewhere near the quarries, and small nodules and spalls of raw material that were used for direct percussion and bipolar percussion of tools in the household (Jackson and Love 1991). It is likely that the nodules and spalls used for household production were traded through networks of individual households that provided an alternative to elite-dominated long-distance routes (Love and Jackson 1999). Importantly, this household network of exchange constituted a possible means of resistance to the attempts of elites to institute a public economy and to control exchange with distant groups. However, consumption data indicate that the importance of the household obsidian network declined from the Middle Formative to the Late Formative, reflecting a decrease in household economic autonomy. For example, at

La Blanca, the ratio of blades to flakes averaged about 1:4 over the entirety of the Conchas phase. At El Ujuxte, the ratio is about 1:1 (Tabares et al. 2005). If blade distribution became elite controlled by the Late Formative period, which is something we need to document more fully, the numbers would indicate both increased control by the elites of a very important commodity and attempts to cut off the independent household networks of exchange.

In sum, the evidence currently available from El Ujuxte demonstrate that the Late Formative economy was much more centralized and dominated by the elite than was the case in the Middle Formative. Elites had a much firmer grasp on surplus storage, over the production of economically important items, and over the long-distance exchange of both basic and exotic materials. In addition, it appears from the obsidian data that elites took steps to eliminate independent exchange networks that would have otherwise sustained higher degrees of household economic autonomy.

CONCLUDING THOUGHTS

The changes in the scale and form of urban settlement over the length of the Formative period were dramatic. Taken as a whole, Formative period population exploded, cities grew, class differences became hardened, and political centralization increased. At a finer-grained level, however, the changes were episodic and punctuated. Political centers were not fixed, cities rose and fell, political integration was never long-lived, and the ideological basis of power was continually shifting.

Cities and urbanization took many forms, even in Formative period Mesoamerica. To address the causes and the nature of those differences is to ask the fundamental question of why cities exist. In our case studies, the causes were multiple. Cities were economic centers, ritual centers, and political centers. Following the collapse of the La Blanca polity ca. 600 BCE, Izapa grew to be a large center, with a 16 m high mound by the Escalon phase. Izapa continued to expand throughout the remainder of the Middle Formative period, reaching its apogee during the Late Formative period between 300 and 100 BCE. The latter part of the Middle Formative was probably a period of political turmoil, and new urban forms emerged by the Late Formative. The Late Formative period cities of Izapa and El Ujuxte were both larger and more highly structured than Middle Formative La Blanca. Nevertheless, all three of these cities accommodated large populations and had ritual spaces at their centers that were spacious, formally arranged, and served as venues for ritual performance. But far from being solely 'ritual-ceremonial' cities, these capitals were vibrant seats of economic power as well.

The increased formalism of city planning that began after the fall of La Blanca mirrors the increase in elite control over the economy and over ritual.

While the Conchas phase saw fundamental economic transformations that gave rise to material differences in wealth, the post-La Blanca epoch saw an elite class gain firmer control over economic production and exchange. Governmental structures were created to administer centralized power, as profoundly evidenced in the increased hierarchy of settlements in the Late Formative and the more rigid planning of not only the cities themselves, but of the secondary centers in their orbit of control.

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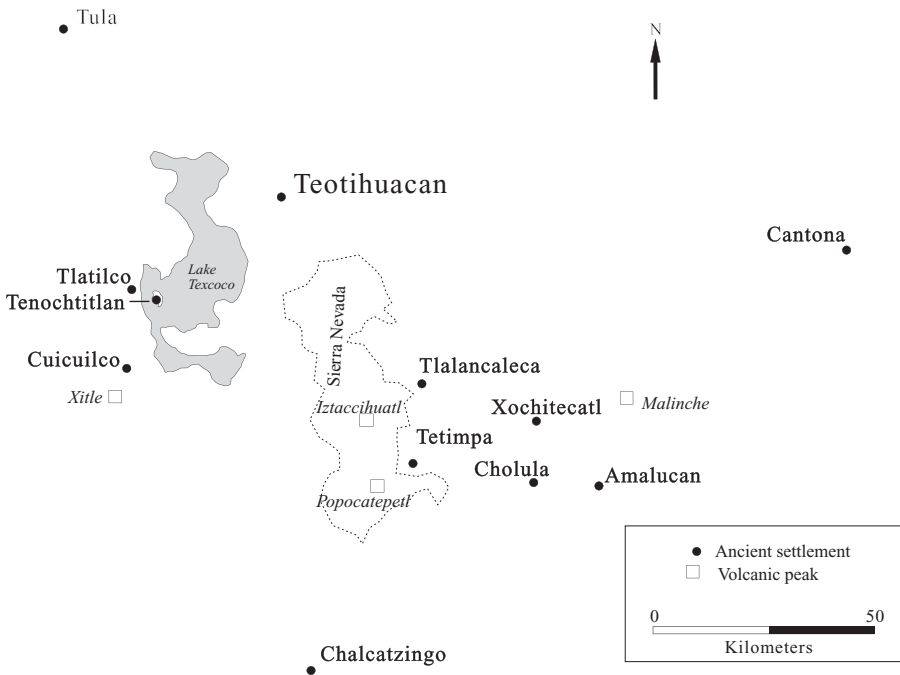
CHAPTER EIGHT

THE NATURE OF EARLY URBANISM AT TEOTIHUACAN

Saburo Sugiyama

IF ANY REGION CAN BE DESCRIBED AS A “HEARTLAND OF CITIES” FOR ancient Mesoamerica, it is the Central Highlands of Mexico. This region is famous for many of the greatest metropolises of the Precolumbian Americas, including Teotihuacan, Cholula, Tula, and Tenochtitlan (Fig. 8.1). Although these great cities had their heydays in the Classic and Postclassic periods, the roots of urbanism lie in the Formative period when early cities developed throughout Central Mexico, including the Basin of Mexico, Tlaxcala, and Puebla (Carballo 2016). As with the other chapters in this volume, understanding Classic period urbanism in Central Mexico requires that we examine the growth and expansion of central places, beginning with the Early Formative and tracing the development of intensive sociopolitical and ideological interactions.

David Carballo (2016) proposes two “pulses” of urbanization in Central Mexico, one in the Late Formative exemplified by the rise of Cuicuilco, and a second in the Terminal Formative and Early Classic associated with the emergence of Teotihuacan and Cholula, followed somewhat later by Cantona. I view the situation as somewhat more complex and propose that Teotihuacan itself had two pulses. At Teotihuacan, the first urban pulse occurred with the founding and rapid rise of Teotihuacan in the Patlachique phase. Patlachique has long been dated from 100 BCE to 1 BCE, but my colleagues and I place it somewhat later, although still within the Late to Terminal Formative period (Fig. 8.2). The second pulse at Teotihuacan came



8.1. Map of the Central Highlands of Mexico showing sites mentioned in text. Map by Michael Love

CERAMIC PHASES	DATES	MONUMENTS		
Coyotlatelco		Moon Pyramid	Sun Pyramid	Feathered Serpent Pyramid
(Collapse)	600	?	?	?
Metepec	550			
Xolalpan	500			
Late Tlamimilolpa	450	Stage 7A	2nd Stage	
	400	Stage 7 (Moon Pyramid)		
Early Tlamimilolpa	350	Stage 6 — Burial 5,4		
	300	Stage 5 — Burial 3	w/Adosada	w/Adosada
	250	Stage 4 — Burial 2,6	1st Stage	Ciudadela-FSP
Micaotli	200	Stage 3	Offering 1 and 2	Sacrificial Burials
Tzacualli	150	Stage 2		
	100	Stage 1	Pre-Sun Pyramid	Pre-Ciudadela
Patlachique	50			
	CE 0			
Cuanalan	BCE 50			

8.2. The Teotihuacan chronology and its relationship to major construction episodes of the Moon Pyramid, Sun Pyramid, and Feathered Serpent Pyramid. After Cowgill (2015: table 1.2)

with a dramatic reorganization of the city and the construction of the monumental core along the Avenue of the Dead, still visible today. This second pulse also began late in the Terminal Formative, sometime in the early third century CE, and then continued into the Early Classic period.

My chapter here focuses primarily on that second pulse at Teotihuacan, which can be discussed with much more abundant and solid data than the first pulse. In order to integrate these ideas with the other chapters in this volume that focus on early Mesoamerican cities in the Late and Terminal Formative periods, I present my perspectives pointing out both the distinctiveness of Teotihuacan urbanism and its similarities with the other cases presented here. I mainly use the data gathered from three major monumental units: the Sun Pyramid precinct, the Moon Plaza complex, and the Ciudadela (Citadel) with the Feathered Serpent Pyramid. I also use data from domestic spaces, but the three monumental constructions and the city-layout integrating them represent, in fact, one of the most distinctive features of Teotihuacan in comparison to other early Mesoamerican cities. Archaeological investigation at Teotihuacan intensively explored the interior of the monumental edifices through tunnel excavations, uncovering earlier structures and unusual burial/offering complexes. These data led me to conclude that ideational components, including worldview, structured the spatial distribution of the pyramids. These distinctive urban features reveal three components: (1) beliefs and practices inherited from earlier cities and towns in Central Mexico; (2) elements of “high culture” shared with other cities in Formative period Mesoamerica; and (3) innovate practices created at Teotihuacan itself. The materialization of worldview and other cultural features through grand-scale monumental construction stimulated the aggregation of diverse populations and led to the creation of the first multi-ethnic metropolis in the last centuries of the Formative period. We can now describe this process more concretely and more accurately due to a refined chronological framework (Fig. 8.2).

THE GROWTH OF EARLY CITIES IN CENTRAL MEXICO

As Carballo (2016: 17) notes, “it is important to emphasize that central Mexican urbanization occurred in the context of interregional interaction between several macro-regions that underwent similar urban transformations simultaneously and developed tiered settlement hierarchies of cities, towns, villages, and hamlets.” In order to understand early Teotihuacan, we need to look outside the confines of the Basin of Mexico and examine more broadly the Central Mexican Highlands, an area that covers nearly 50,000 km² and includes the modern states of Mexico, Tlaxcala, and Morelos in addition to southern Hidalgo, central Puebla, and modern Mexico City (Grove 2016; Plunket and Uruñuela 2012; see also Nichols 2016).

The Mexican highlands have a rich natural environment characterized by alluvial plains and lakes surrounded by volcanic mountain ranges. The temperate climate and an average annual rainfall of 450–900 mm mean that the area is well suited for agriculture. Locally available materials like rocks and minerals (particularly obsidian), wood, aquatic resources from lakes, and comestibles such as salt and cacti enhanced the quality of everyday life and were used for diverse purposes from construction to tool production, ornamentation, food preparation, and ritual. Domestication of a wide variety of plants began by 5000 BCE, and, during the Formative and Early Classic periods, advanced agricultural technologies such as irrigation, terracing, and raised agricultural fields, or *chinampas*, were utilized to consistently produce enough food to maintain populous communities throughout the Mexican highlands (McClung de Tapia 1992). It is often argued that only turkey and dogs were domesticated in Mesoamerica. However, a wide variety of animals, including small game, were abundant enough to be intensively exploited, consumed, and controlled. These include deer, peccaries, rabbits, and a variety of insects, frogs, freshwater fish, and waterfowl (Valadez 1999).

The long processes of interaction between diverse natural resources and people in this region were fundamental to the population increase and the development of early complex social organizations. The archaeological record suggests that both population and social complexity in the highlands increased with the exploitation of resources and the development of other technological and organizational advancements for ceramic production, obsidian, and other craft industries, as well as market economies (Clark and Parry 1991).

THE ROOTS OF CENTRAL MEXICO'S URBAN TRADITION

The Formative period in Central Mexico in general remains understudied (Grove 2014, 2016; Plunket and Uruñuela 2018), and many critical data are missing for the Early and Middle Formative. Most known Early Formative sites in Central Mexico belong to what David Grove labels the “Tlatilco culture.” The sites of this period are all small- to moderate-sized villages. Although Tlatilco itself is often portrayed as a large regional center, Grove (1981b, 2016) believes that it was not a single large site but three to five small villages. Those smaller settlements would be similar in size to the Tlatilco culture sites in other parts of the Central Highlands, including Morelos.

The existence of a hierarchy of sites in the Basin of Mexico during the Early Formative is often inferred based on the differential distribution of “Olmec” style pottery, but the differences may be chronological (Grove 2016). If public architecture is indicative of integration, then Early Formative Morelos may have had larger polities than the Basin of Mexico. Chalcatzingo had already emerged as a regional center during the Early Formative as indicated by two

Early Formative platform mounds, one of which is stone-faced (Aviles 2000; Prindiville and Grove 1987: 63–65).

Chalcatzingo continued as a regional center into the Middle Formative period. Like other Middle Formative cities in Mesoamerica, it can be described as urban in the functional sense, although its size was a modest 43 ha in overall extent (Hirth 1987). Middle Formative Chalcatzingo was a dispersed settlement covering a series of wide terraces (Grove 2016). At the center of the settlement was a large earthen platform mound – the largest example of public architecture known in Middle Formative central Mexico according to Grove (2016) – which was roughly 70 m long, 15 m wide, and nearly 8 m in height. Over thirty-five carved monuments, including stelae, are known at Chalcatzingo. The early stela and altar pairings link the site more strongly to the Guatemalan Highlands and Pacific Coast, where such combinations also first appear during the Middle Formative (Arroyo, Chapter 6; Bove 2011; Love 2010). These monuments, and other features, demonstrate what Grove calls the “southern connection,” and the participation by Central Mexican elites in a Middle Formative high culture of art, esoteric religious knowledge, and possibly shared engineering knowledge as well.

Kenneth Hirth’s (1987) survey of the Amatzinac valley shows that Chalcatzingo was the major Middle Formative center of the valley and at the top of a three-tiered site hierarchy. Three other settlements in the valley (Telixtac, Las Pilas, and Campana de Oro) also had public architecture. To date, the scale of monumentality known in Morelos and in Guerrero at Teopantecuanitlan (Martínez Donjuán 2010) is not matched in the Basin of Mexico during the Middle Formative.

In the Basin of Mexico, several populous villages were consequently established by the Middle Formative period (Sanders et al. 1979), when intra- and interregional relations also became critical to the development of complex societies. The Basin of Mexico survey shows that it was during the period from roughly 650–300 BCE that a three-tiered settlement hierarchy first appeared, although there also may have been a single four-tiered hierarchy dominated by Cuicuilco (Sanders et al. 1979). Much depends upon whether one accepts the proposition of Robert Heizer and James Bennyhoff (1972) that monumental architecture began at Cuicuilco at this time.

THE LATE FORMATIVE FLORESCENCE

Regional surveys throughout the Central Highlands show major population growth beginning in the Late Formative. Ángel García Cook (1981) describes the Late and Terminal Formative periods in Puebla and Tlaxcala as eras of regional florescence, though populations were probably less dense than in the Basin of Mexico (Carballo 2016: 84). Nonetheless, Amalucan reached a size of

over 10 km² with an extensive system of irrigation canals (Carballo 2016; Fowler 1987; Grove 2016). Within the Puebla/TLaxcala region there are also signs of monumental construction at Cholula, Xochitecatl, and Teotihuacan (Grove 2016; Plunket and Uruñuela 2018; Serra Puche and Beutelspacher 1994; Spranz 1970). Early versions of Late Formative talud-tablero architectural facades – characterized by an inward sloping panel called a *talud* and a table-like, right-angled panel with an inset called a *tablero* – are found at Tlalancaleca (García Cook 1981) and Tetimpa (Plunket and Uruñuela 1998). The talud-tablero configuration, which would become a hallmark of Teotihuacan architecture, significantly varied in detail, and changed through time in the form and materials used. This architectural style, which was not at all architecturally stable, should be considered as shaped by the symbolic meanings involved; therefore, it can be seen as manifesting shared ideological factors that were applied to public structures widely throughout the Mexican highlands.

Returning to the Basin of Mexico, Late Formative period Cuicuilco was clearly urban in both functional and demographic senses. William Sanders et al. (1979) estimate that Cuicuilco covered at least 400 hectares and held a population of over 20,000 people. The site consists of a truncated, cone-shaped main structure (with a diameter of ca. 160 m), as well as houses, plazas, and smaller platforms of various shapes. The placement of the main structure at Cuicuilco suggests its solstitial significance (Šprajc 2001). The center functioned for centuries as a large ceremonial precinct until it was destroyed by lava from the Xitle volcano (Cummings 1933). Several dates have been proposed for the eruption of the Xitle volcano, including 1 CE, 200 CE, and 400 CE. The eruption would not necessarily have caused the emergence of Teotihuacan as some have argued (Cordova et al. 1994; Heizer and Bennyhoff 1972; Pastrana and Fournier 1997). If the later date of the eruption is correct, in fact, Cuicuilco coexisted with Teotihuacan for at least a few centuries, either as an ally or as a rival center.

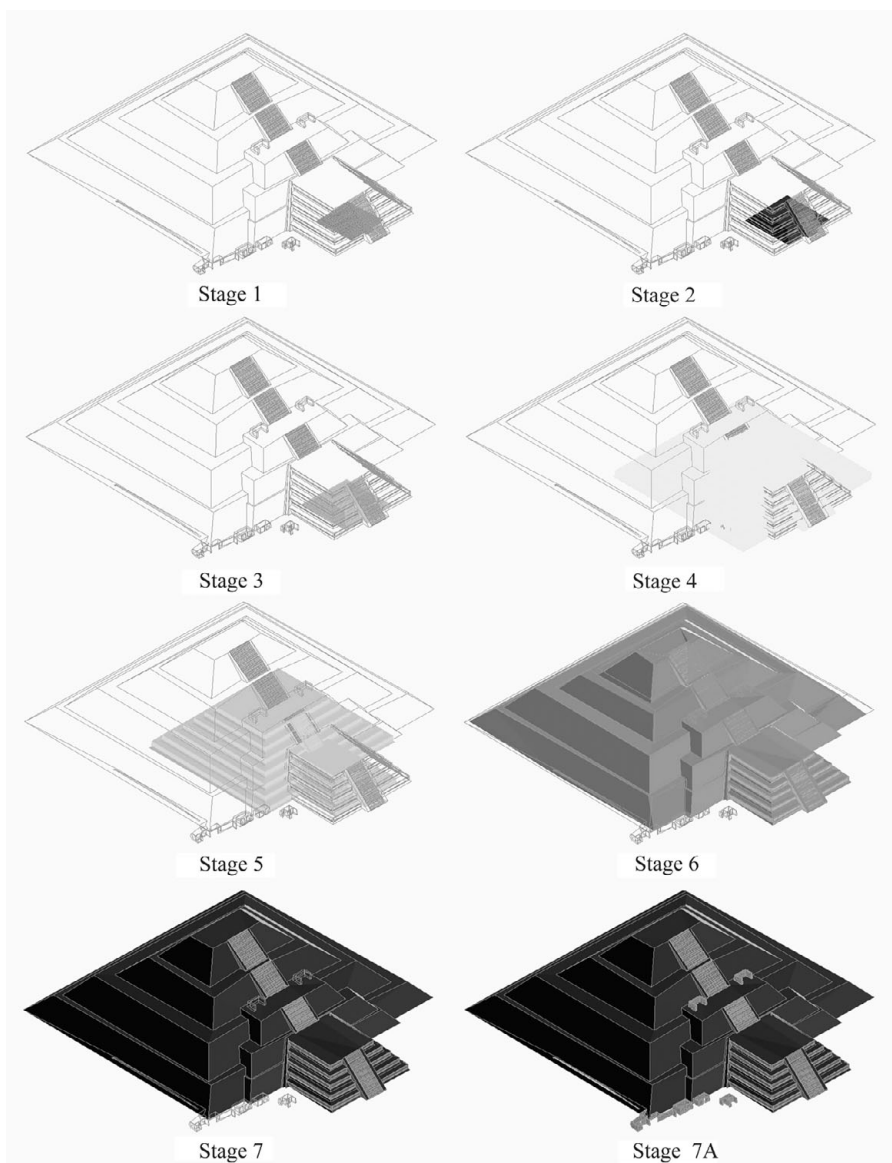
The eruption of the Popocatepetl volcano around the year 1 CE certainly, however, would have affected communities in the Valley of Mexico and Puebla, such as Tetimpa (Plunket and Uruñuela 2006), and might have triggered the formation of new ritual centers including Teotihuacan. The eruption would have caused region-wide deterioration by lava flows or fires, thereby affecting the distribution of plants and animals and causing the relocation of people. Its impact might have extended to native worldview and religious thought as well. For example, following these Late Formative events, a suite of fire-heat-dry symbolism, like that embodied by the Old Fire God (Huehuetēotl), became explicit in iconography of the Mexican highland centers, including Teotihuacan.

EARLY TEOTIHUACAN

The creation of the ancient city of Teotihuacan began sometime around the first century CE in the central and lowest area of the Teotihuacan Valley, located in the northeastern part of the Basin of Mexico (Millon 1981). The location of Teotihuacan is significantly different from both older and contemporaneous cities of Late Formative Mesoamerica such as Cuicuilco, which developed on a lake-shore, or Monte Albán, the hilltop center in the Valley of Oaxaca (Joyce, Chapter 2). Teotihuacan was located near agriculturally rich lands of the lower valley filled with rivers and springs. Its iconography clearly demonstrates the importance of water-agriculture symbolism (as in recurring references to the Storm God and Goddess of Water), often articulated in conjunction with fire symbolism. As discussed below, environmental or geographic features like the putative “natural cave” found under the Sun Pyramid were not likely reasons for the location of Teotihuacan. Rather, a specific spot was selected in order to construct a cosmic city layout.

Teotihuacan was founded as a city during the Late Formative period and grew rapidly to urban proportions during the Patlachique phase. George Cowgill writes that “it has been difficult to get people to recognize that the Patlachique phase was more than a prelude to the development of Teotihuacan.” He emphasizes, for example, that the Teotihuacan Mapping Project (TMP) found “fairly dense” concentrations of Patlachique phase sherds over 6–8 km² and evidence of a population estimated to have been at least 20,000 people (Cowgill 2015: 53). The highest densities of Patlachique phase ceramics were collected by the TMP in an area around the eastern and northern slopes of the hills of Colorado and Malinalco. Cowgill (2015: 55) concludes that “whatever the outcome of further ceramic analysis, the Patlachique phase settlement classifies as urban in size.” However, this preliminary conclusion, based on surface ceramic collections, must be verified by excavations.

We know that there were public constructions dating to the Patlachique phase, but few traces remain. Recent excavations in the city’s central zone suggest that ritual activities were fundamental to attracting people during this early period. We now know that there was a small-scale pyramidal platform prior to the construction of what later became the Moon Pyramid (Sugiyama and Cabrera Castro 2007). Our tunnel excavations inside the Moon Pyramid revealed that there were seven overlapping construction stages and that the innermost and earliest structure dated around 100 CE. This Patlachique phase structure (Stage 1) consisted of a platform with stepped *taludes* located approximately on the N-S axis of the city (Fig. 8.3). This pyramidal construction of modest size, the earliest in the Teotihuacan valley, functioned as a platform for public events, such as rituals, rather than for private or daily life activities.



8.3. Reconstruction of the seven stages of the Moon Pyramid found by tunnel excavations.
© Moon Pyramid Project

Earlier construction at the Sun Pyramid prior to 200 CE also seems to have served a public, rather than private, function in spite of the fact that it did not take the form of a pyramidal platform like that in the Moon Pyramid complex. Inside the Sun Pyramid we found a long and thick wall (2.5 m × 14 m at least, and probably more than 28 m long) that may have delimited a large ceremonial or administrative open space before the Sun Pyramid was constructed (N. Sugiyama et al. 2013). At the Ciudadela, archaeological data demonstrate the presence of monumental and residential structures although most of them

were intentionally destroyed when the Ciudadela itself was built. Certain kinds of public architecture, with stone sculpture, had been erected and burials, possibly sacrificial, were dedicated to this unknown monument (Sugiyama 2005). Other pre-Ciudadela constructions, including a possible ballcourt and a residential/administrative complex, are also proposed to have been in use before the Feathered Serpent Pyramid was constructed (Gazzola 2009, 2017). Unfortunately, we do not have data enough to precisely date these earlier constructions. Nonetheless, it seems that masonry public buildings were first constructed no later than the second century CE at these three locations where Teotihuacan's largest Classic period monuments were eventually built.

We do not know the identity of Teotihuacan's founders. They may have been local people or they could have been immigrants. In either case, the data suggest that during initial stages a new settlement with small-scale public constructions rather quickly became a large ceremonial center with monumental architecture in a new style. As described below in detail, it can be concluded with new excavation data that an exceptionally large-scale construction project took place around 200–250 CE, mostly demolishing previous constructions. Solid radiocarbon data suggest that Stage 4 of the Moon Pyramid, the bulk of the Sun Pyramid, and the Ciudadela complex, including the Feathered Serpent Pyramid, were built contemporaneously. Although there could have been short time gaps between events, it is probable that the construction projects of the three pyramid complexes, probably along with other public compounds and the Avenue of the Dead, were carried out as part of a meaningful master plan.

At the Moon Pyramid we analyzed forty-three samples for radiocarbon dating, from which thirteen dates were assigned for Stage 4, which was one of seven overlapping stages. Each consecutive building seems to encapsulate significantly different symbolic meanings, which reflected the developing political power of ruling groups who executed the constructions and their associated dedication rituals. The Stage 4 building was dated around 250 CE and constituted a substantial enlargement of the structure, nine times bigger than the previous one.

The TMP dated the earliest construction of the Sun Pyramid to sometime during the first century CE (Cowgill 2015; Millon 1973). However, recent studies place the construction around the early third century CE (N. Sugiyama et al. 2013). The Sun Pyramid exhibits two chronologically different stages. The earlier one measures 216×215 m at the base, while the later measures 223×224 m. The exact heights of these stages are unknown because of the destruction of the upper sections by later construction. To date the earlier pyramid stage, we recently obtained new radiocarbon dates. Eight samples consistently indicate that the original construction was completed around 225 CE (or 170–310 CE with calibrated 2 sigma). The last stage of the Sun

Pyramid has been dated to 450 CE by the TMP. The frontal (western) façade demonstrates a more complicated enlargement/modification process. At any rate, the information indicates that the first stages of the Sun Pyramid and the Moon Pyramid (Stage 4) were built contemporaneously.

In the Ciudadela area, we have some information concerning the earliest constructions, although their precise absolute dates and stratigraphic data are not available yet. Eighteen samples from the Feathered Serpent Pyramid excavations provided precise and consistent dates for the monumental construction we see today. The main pyramid construction, with the sculptural program on its façade, seems to have taken place around the early third century CE, while the Adosada platform was constructed later, ca. 350 CE. In other words, the Feathered Serpent Pyramid was built at the same time as the Sun and Moon pyramids. This argument is also supported by the fact that their spatial arrangements were clearly planned with meaningful distances in numbers, as described below. By the time these three buildings were constructed, truly urban life with diverse activities was flourishing under the strong control of the state that had created this unprecedentedly monumental construction complex.

These massive construction efforts, in effect, remade Teotihuacan near the beginning of the Miccaotli phase, between 200 CE and 250 CE. They also served to create a planned city whose ideological factors materialized a cosmovision that became the primary attractive force that propelled not only tremendous growth in the city but also increasing power during the Classic period. Before I touch upon the issues of the Teotihuacan polity, I will outline the ideological factors within this cosmovision and address how it attracted people to urban life at Teotihuacan.

Teotihuacan became a multi-functional metropolis full of appealing ideas, exotic materials, new technologies, and economic benefits. In order to better understand the beginning of this new generative wave of urbanism at Teotihuacan, I focus on the meaningful materialization of deeply held value systems, which were explicitly manifested in the early monuments and the city layout. These attractive forces consisted of a combination of elements drawn from diverse sources that included earlier urban plans in the Central Mexican Plateau, sacred knowledge shared with other Mesoamerican elites (as part of a system of high culture; see Guernsey and Strauss, [Chapter 9](#); Love, [Chapter 1](#)), and novel forms distinctively created at Teotihuacan.

COSMIC CITY PLANNING

The urban plan of Teotihuacan did not result from the location of the sacred “natural cave” found under the Sun Pyramid as once believed (Heyden [1975](#), [1981](#)), nor from other natural features on the landscape. Instead, the location

and the standardized orientation for the city was shaped fundamentally by ancient Teotihuacanos. The so-called natural cave was, in fact, an ancient tunnel completely generated by ruling groups who ordered construction of the pyramid (Manzanilla 2009; Manzanilla et al. 1989, 1994). Recent discovery of a very similar ancient tunnel under the Feathered Serpent Pyramid (Gómez 2017) clearly indicates the intentionality of the two related tunnels.

My argument is that a consistent orientation and a standardized unit of measurement were rigorously and systematically applied to build harmoniously balanced constructions within the formidable sacred precinct of Teotihuacan. Applying the standardized Teotihuacan measurement unit (83.0 cm) to the city's monuments results in many numbers that possess a special symbolic weight in Mesoamerican cosmology, to such an extent that surely belies mere coincidence (Sugiyama 1993, 2010). The grand-scale monumentality, consistency, and precision of the city layout, in addition to the fundamental cosmic significance materialized in such architecture, made Teotihuacan the most prominent and compelling city of its time in Mesoamerica.

The Orientation of the Teotihuacan City Grid

The grid system of the sacred city was rigorously implemented to follow 15.5 degrees east of astronomical north. The main north-south axis of the city was evidently set toward the top of the highest mountain of the Valley, Cerro Gordo. However, the reasoning behind the standardized east-west axis was not clear until archaeo-astronomical studies clearly disclosed cosmic determinants. Teotihuacan's western axis, toward which the major pyramids face, follows a line of sight to the setting of the sun on August 11 and April 29. The interval separating the two dates of the setting sun is 260 days and 105 days (Dow 1967; Millon 1993), making it obvious that Teotihuacan's builders planned the east-west axis of the city based on the most important ritual calendar in Mesoamerica, the 260-day calendar. In other words, the east-west walls of virtually all Teotihuacan buildings marked the beginning and end of the sacred period of 260 days. We can consider Teotihuacan as the place where the 260-day ritual calendar was most clearly honored in urban planning. This observation concurs with what my study of the Teotihuacan measurement unit indicates, as discussed below.

The setting sun on August 11 also commemorated the legendary date of cosmic origin for the ancient Maya. The date coincides with the initial day, or base date, of the Long Count calendar, August 11, 3114 BCE, which the Maya viewed as the moment when time and space were created (Aveni 1980; Freidel et al. 1993). I suspect that this very special cosmic calendrical legend was one of the intellectual products invented and shared by Late Formative Mesoamerican peoples, or their forebears, as evidenced by planned settlements on the Pacific



8.4. View from the central axis of the Avenue of the Dead looking north toward the Moon Pyramid, whose summit aligns with the top of Cerro Gordo. Photo by author

Coast and architectural constructions in the Maya Lowlands that reflect the development of sophisticated astronomical and calendrical knowledge (Coggins 1980; Green 2014; Love and Rosenswig, Chapter 7; Poe 2000). Although the Teotihuacanos did not leave written record of a comparable legendary base date for creation, the profound cosmological importance of the 260-day ritual calendar was explicitly and publicly engraved into the whole city layout, and integrated into urban planning on a monumental scale.¹ Interestingly, many modern houses in the Teotihuacan valley still have the same orientation, although it is not clear for how many centuries following the collapse of Teotihuacan that people remained consciously aware of the significance of this orientation. It is remarkable that this cosmogenic division of time and space was created and materialized on such a grand scale by the Terminal Formative Teotihuacanos.

In contrast to the east–west orientation that reflects the solar and ritual calendars, the north–south orientation was apparently determined by geographic factors in the valley. The Avenue of the Dead that served as the city’s central north–south axis (Fig. 8.4) is directed toward the summit of Cerro Gordo (Tobrer 1972). As the tallest peak in the Valley of Teotihuacan, Cerro Gordo was considered a sacred mountain. In all likelihood the ancient inhabitants and visitors who walked northward on the Avenue of the Dead saw the Moon Pyramid, framed by Cerro Gordo, as a symbol of the sacred mountain connected to the watery underworld. From the time of its foundation, the city was structured with the east–west direction as the cosmological or astronomical axis and the north–south direction as its geographic or terrestrial axis. As described below, spatial analyses also indicate that the ceremonial center was oriented to the movement of celestial bodies like the Sun, the Moon, and

¹ Archaeological evidence supports direct and intensive interaction between the Teotihuacan government and Maya elites (Pendergast 1971; N. Sugiyama et al. 2020; Sugiyama and López Luján 2007), and it is highly likely that the 260-day ritual calendar was a concept shared by the Teotihuacanos, their Maya contemporaries, and other Mesoamerican societies as well.

Venus, with the natural landscape integrating the 365-day solar calendar, the 260-day ritual cycle, and the 584-day Venus cycle; the 260-day calendar in particular was essential for dividing space and time at Teotihuacan, as it was in many Mesoamerican cities (Sugiyama 2010, 2017).

The Teotihuacan Measurement System

One of the main features of Teotihuacan urbanization was the symbolic spatial distribution of buildings, laid out with exceptional precision. Urban planning was governed by rigorous rules of such accuracy that we were able to confirm them with the aid of modern high-precision instruments. To achieve this precision, the Teotihuacanos relied on sophisticated engineering, architectural techniques, consistent long-term astronomical observations, and a specific measurement system to plan and carry out the monumental construction.

One of the measurement units that Teotihuacan builders most probably used to determine length was 83.0 cm, which I have called the TMU (Teotihuacan Measurement Unit). My study indicated that the city was planned using this unit of measurement in order to materialize a specific cosmogram that spatially integrated the cycles of the sun, the moon, the planets, and calendrical calculations (Sugiyama 1993, 2010). Below, I provide a summary of my study of the TMU, initially carried out using precise plans by the TMP (Millon et al. 1973), and reexamined based on a new digital three-dimensional plan in AutoCAD, which I created to include virtually all structures discovered and restored at the Teotihuacan Archaeology Park (Sugiyama and Cabrera Castro 2007).

The measurement unit used at Teotihuacan has been explored by various scholars (Clark 2010; Drewitt 1967, 1987; Drucker 1977a, 1977b; Séjourné 1966). I deduced the 83 cm unit empirically during my fieldwork in the 1980s. During the mapping of the Feathered Serpent Pyramid, I noted that the widths of the balustrades, the width of the main stairway (which is the same as that of the Moon Pyramid), the consistent distance between the sculptures on the Feathered Serpent Pyramid, and the overall dimension of the pyramid were all multiples of approximately 82.3 cm. Later I applied other measurements around 83 cm (80–85 cm) to other major structures and between the axes of the main architectural complexes in the central part of the city to refine it. Applying the 83.0 cm unit unexpectedly produced figures that were significant in the Mesoamerican calendar and cosmology as described below.²

² Ethnohistorical information, independent of archaeological data, supports the proposed measurement unit. Colonial sources document that the later Aztec people used names of parts of the human body as measurement units for land and construction. The names of body parts functioned as units to measure certain short distances, such as *cenyolloli*, the distance from the heart to the finger (about 0.8 m) or *cennequetzalli*, the height of a standing man (about 1.6 m),

In the case of Teotihuacan, it is important to study the proposed measurement unit with data from the original constructions of a specific period, given the possibility that the unit could have changed through time, as happened in other ancient societies. Here I mainly focus on the three structures discussed above – Stage 4 of the Moon Pyramid, the first construction phase of the Sun Pyramid, and the Ciudadela with the Feathered Serpent Pyramid. These structures were built, modified, or enlarged, but they apparently maintained the spatial relationships that governed the metropolis as a structured colossal whole.

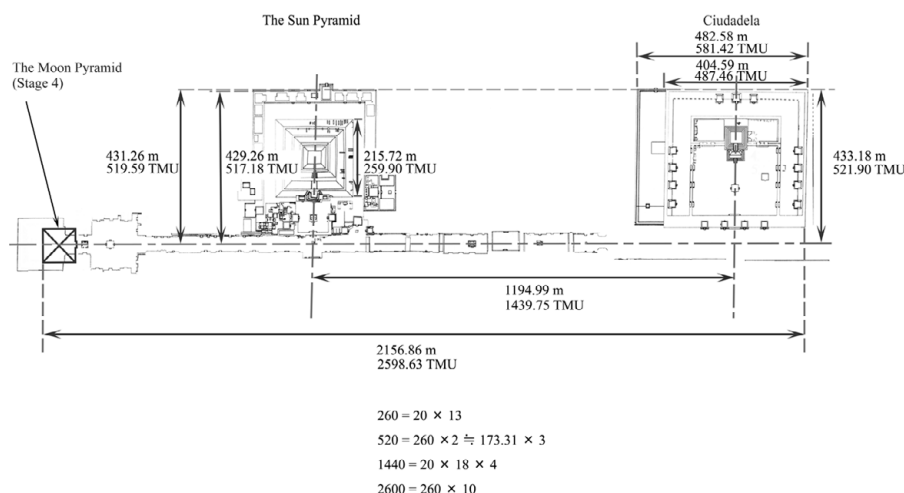
The Symbolism of Spatial Patterning during the Miccaotli Phase and Beyond

The principal monument at Teotihuacan was the Sun Pyramid, constructed around 200–250 CE, originally without the Adosada platform that we can see today (N. Sugiyama et al. 2013). The main body of the pyramid was enlarged only once around 450 CE (Millon 1973), whereas the Adosada platform was modified on more than four occasions (Alejandro Sarabia, personal communication 2018). The original pyramid measured 214.6 m (258.6 TMU), 215.2 m (259.3 TMU), 215.7 m (259.9 TMU), and 210.5 m (253.6 TMU) at the base on the north, east, south, and west sides, respectively. These dimensions in the TMU suggest that the dimensions of the Sun Pyramid referenced the ritual calendar of 260 days.

The city's main north–south axis was clearly the Avenue of the Dead, whose central line coincides exactly with the axis of the Moon Pyramid (Fig. 8.5). Parallel to this main axis there were apparently two lateral axes. The precise dimensions of the Sun Pyramid Complex and the Ciudadela are equal in the east–west direction. The distance between the central axis of the city and the eastern limit of the Sun Pyramid Complex and the distance between the same axis and the eastern limit of the Ciudadela are 431.3 m (519.6 TMU) and 433.2 m (521.9 TMU), respectively. The intent is obvious, because the two distances coincide and correspond almost perfectly to twice the original dimension of the Sun Pyramid, or 260 TMU. Thus, the planned correlation reinforces the identification of the measurement of 260 TMU (or 216 m) as a unit applied on a larger scale in urban planning at Teotihuacan. Moreover, the data confirm the importance of the 520-day cycle (260×2), which is about three times the lunar eclipse period, discussed below.

The measurement of 260 TMU was apparently used in other architectural complexes as a sacred unit as well. For example, it appears in the so-called

among others (Castillo 1972). As in many other civilizations worldwide, at Teotihuacan the human body was also the basis for measuring space, and Teotihuacan city planners probably used a unit of 83 cm to create precise constructions in the sacred precinct.



8.5. Plan of the central zone of Teotihuacan with measurements in meters and TMU. The distance between the Sun Pyramid and the Ciudadela reflects a large cycle of time that integrated the solar calendar with the Venus cycle. © Saburo Sugiyama

Great Compound (Millon 1973: 19–20), the partially excavated Xalla complex (Manzanilla et al. 2005), and the complex to the north of the Sun Pyramid (Complex 73 and 74 at N4E1, according to Millon et al. 1973), whose eastern limit has been precisely defined in excavations.

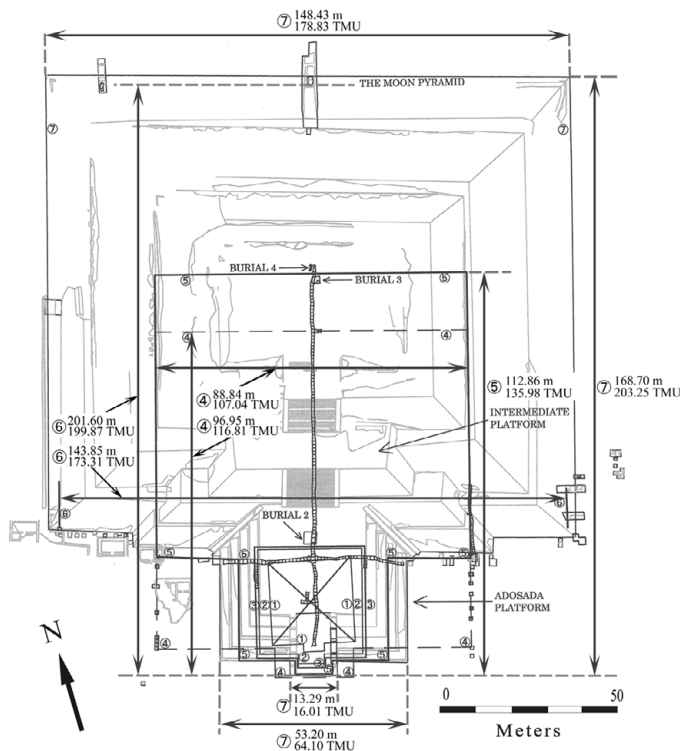
Solid evidence shows that the total distance of the central zone in a north–south direction coincides exactly with 10×260 TMU. The distance between the north limit of Stage 4 of the Moon Pyramid and the south limit of the Ciudadela or, in other words, the total dimension of the sacred precinct at that time, was 2,156.9 m (2,598.7 TMU, or 10×260 TMU), or ten times the dimensions of the Sun Pyramid. This implies that site planning was structured by the concept of sacred time conceived through the two major building complexes, all part of a master plan.

The Ciudadela was the largest ceremonial complex where state ritual activities were carried out in Teotihuacan (Cabrera Castro et al. 1991a, b). The study of the Teotihuacan measurement system shows that the dimensions of this ritual space were related to cycles of the planet Venus. Whereas the overall dimension of the Ciudadela in the east–west direction reflects the 260-day or 520-day ritual calendar, its north–south longitude is 404.6 m (487.5 TMU). The number 487 corresponds to the total days that Venus is visible, according to Maya records (Aveni 2001: 187). Venus was the most important celestial body associated with warfare, and it appeared as the morning star for 236 days and as the evening star for 250 days, yielding a total of 486 days. If the closed space added to the great north platform of the Ciudadela (Complex 2) is included as an interior section of the Ciudadela complex, the total measures 482.6 m (581.4 TMU). The corresponding figure in TMU coincides

approximately with the complete Venus cycle (584 days), although the wall on the north side is not well defined by excavation. Therefore, evidence suggests that the space of the Ciudadela very probably symbolized the movement of Venus, and that the principal monument in the Ciudadela, the Feathered Serpent Pyramid, coherently embodied the larger symbolic associations of Venus itself through its militaristic references (Sugiyama 2005).

The distance between the east–west axes of the Sun Pyramid and the Ciudadela represented the major Mesoamerican calendrical cycle (Fig. 8.5). The figure resulting from applying the TMU is 1,195.0 m (1,439.8 TMU), approximately four times 360 days ($1,440 = 4 \times 20 \times 18$). The solar year in Mesoamerica consisted of eighteen months of twenty days with five extra days that were regarded as supplemental. This calculation was also associated with the Long Count system in Mesoamerica, used in the Maya and Isthmian areas, which first appeared on monuments during the Late Formative period (Coe 1981). The Long Count was computed largely in base twenty, but the haab (the Maya vague year of 365 days) was computed as eighteen winals (twenty-day periods), to closely approximate the solar year. More importantly, we should bear in mind that Mesoamerican people gave special importance to the quantity of eight solar cycles, as this coincided with five Venus cycles ($365 \times 8 = 584 \times 5 = 2,920$ days). The builders of Teotihuacan probably rendered the time of this long cycle in sacred space without counting the five extra days ($360 \text{ days} \times 4 \text{ years} \times 2 = 1,440 \text{ days} \times 2 = 2,880 \text{ days or TMU}$). Thus, a complete cycle to the Sun Pyramid and back from the Ciudadela apparently symbolized a great circuit that integrated the solar calendar and the Venus cycle.

Most of the Moon Plaza visible today represents a monumental complex from the city's final stage of glory in roughly the fifth century CE. Its constructions completely covered earlier buildings, so it is difficult to reconstruct the layout of the original plaza. Data are available only from Stage 4, built about 250 CE, as previously discussed. Including the lower part of the talud that was covered by a floor, Stage 4 was 88.8 m (107.0 TMU) by 88.9 m (107.1 TMU) at its base, which was directly in contact with the bedrock (Fig. 8.6). Its dimension in TMU probably complemented the ritual period of 260 days in that together ($260 + 107$) they approximated the solar year. For some reason, the dimension of 107 TMU is longer than the original number, 105, that logic would dictate ($260 + 105 = 365$ days). I suspect that the measurements mentioned above were affected when the lower part of the talud was covered by a corresponding floor now completely destroyed; taking this into consideration, the original distance intended between walls in contact with the floors would have been shorter than 107 TMU. If this interpretation is correct, it follows that the Teotihuacanos might have conceived of the two largest pyramids as complementary stages of a solar year. The Sun Pyramid



8.6. Plan of the Moon Pyramid with distances indicated in meters and TMU. AutoCAD map by Moon Pyramid Project, modified by author

symbolized the sun's movement for 260 days in the southern sky from August 11 to April 29, evidently representing the dry season, and the Moon Pyramid symbolized the sun's movement for 105 days in the northern sky from April 29 to August 11, representing the rainy season. Together they formed the 365-day solar cycle.

In contrast to the buildings from the early periods, the final monuments in the Moon Pyramid (Stages 6 and 7) and the Moon Plaza offer abundant data on the spatial distribution of the ceremonial precinct during the city's peak. Stage 6, which represents another moment of substantial expansion that took place around 350 CE, measures at its base 143.9 m (173.3 TMU) from east to west, and 165.89 m (199.87 TMU) from north to south, including the stairway. The east–west width may have referenced the relationship of the 260-day ritual calendar to the lunar eclipse cycle, which is close to one third of 520, the same number we identified at major monuments as described above ($173.3 \times 3 = 260 \times 2$). The same distance was also applied repeatedly to the Moon Plaza, which confirms that the measurement was one of the dimensions that the Teotihuacanos wished to express explicitly. Significantly, the dimension of the final construction stage of the Moon Pyramid (Stage 7, measuring 178.8 TMU)

coincides with the number of days in lunar eclipse cycles (approximately 178 days). That observation implies that the Teotihuacanos tried to adjust the program to make it consistent with new astronomical knowledge.

The data described above indicate that the city was originally planned to embody cycles of different planets and time that had diverse meanings. To date I have found almost all the important numbers in Mesoamerican calendars (except for those of the lunar calendar) expressed in the city's urban space, particularly in relationship to the major architectural monuments. At this stage of analysis, it is also possible to hypothesize that the Moon Plaza represented the complex movement or phases of the Moon including the eclipse cycle. The name "Moon Pyramid" was perhaps not merely an invention of later Aztec peoples, but might well have had historical roots that date back to the Terminal Formative or the Early Classic period.

The location of "pecked-cross" circles (incised symbols that consist of a double circle surrounding a set of orthogonal axes, often with a fixed number of dots) in different parts of Teotihuacan's ceremonial center and the surrounding landscape also supports the proposed Teotihuacan measurement unit and the calendrical significance of the site's urban planning. Prior studies indicate these markers were signs or signals used to count days primarily from the 260-day Mesoamerican calendar and/or to locate key astronomical observation points for the Teotihuacanos (Aveni 1980). According to my study of the TMU, their locations clearly indicate that they were used as markers to calculate distances that reflected astronomical or calendrical cycles. For example, the markers close to the Viking Group compound on the Avenue of the Dead represented the solar 365-day calendar (not the 360-day version), because the distance between the central east-west axis of the Sun Pyramid and the markers measured approximately 365 TMU. The data confirm that the east-west axis of the Sun Pyramid was the central east-west axis of the city, and that the space of the great ceremonial center reflected developing ideas concerning sacred time divided by the movements of astronomical bodies, mainly the sun, mediated by the human body as an essential unit to measure space.

The symbolic meanings embedded in the city layout suggest that Teotihuacan was a ritual center, designed to convey an innovative intellectual and sociopolitical focus that demonstrated the politico-religious power of the leading group or groups of people responsible for designing and materializing the city. It was not a local village that gradually enlarged to eventually become a big city, however. In fact, we have not uncovered early occupational remains, such as Cuanalan or Patlachique ceramic materials, in excavations within the city's central zone, even though the Teotihuacan Mapping Project found such early ceramics in surface collections in the central area. Although we must further delineate the city's formation process through continued

excavation, evidence indicates that the *impetus* for the city was the result of rather innovative ideological factors that we can productively view as part of a “high culture” system shared with other regions of Mesoamerica.

THE SYMBOLISM OF MAJOR MONUMENTS

The Moon Pyramid

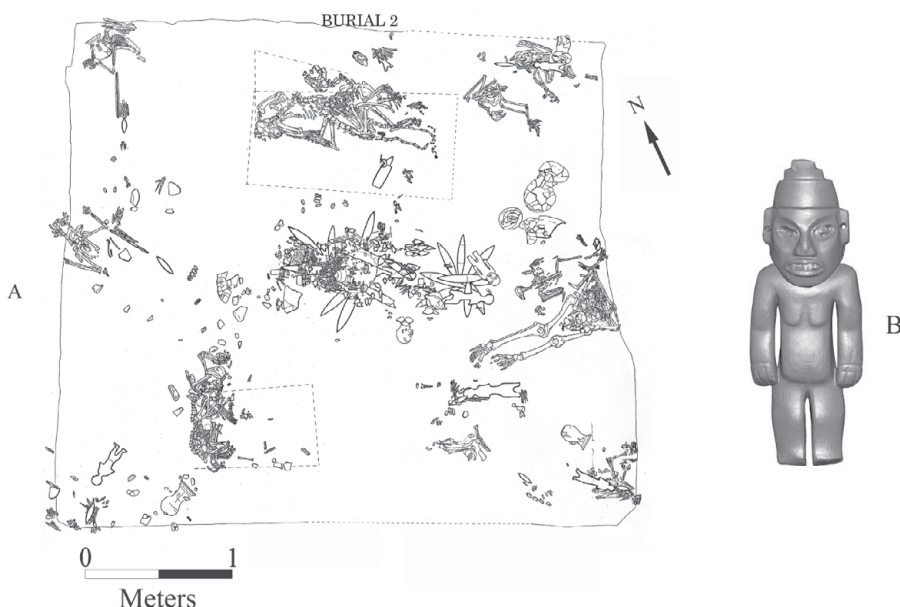
Excavations at the Moon Pyramid in 1998–2004 (Fig. 8.3) revealed the process of the formation and transformation of the monument from its earliest stages (Sugiyama 2004; Sugiyama and Cabrera Castro 2007). One of the most outstanding discoveries at the Moon Pyramid is evidence of ritual sacrifice. Five burial/offering complexes were found in its interior and we interpret these as dedicatory deposits made at either the foundation or termination of various construction phases of the structure (Sugiyama and López Luján 2006, 2007). The burials in the Moon Pyramid, found with abundant offerings of exceptional quality, were apparently not dedicated to a single individual or a deity but rather were fundamental representations of Teotihuacan cosmic ideology (N. Sugiyama 2014). All individuals incorporated into them appear to have been sacrificial victims, dedicated during foundation or termination rituals; no individuals of high status, to whom the victims might have been dedicated, were found during our excavations.

Burials 2 and 6, enclosed within the Stage 4 building, represented one of the richest dedication complexes at Teotihuacan. I believe that the burials embodied innovative religious ideas, astronomical significance, and expert technologies applied to produce new classes of artifacts. The program was evidently designed to proclaim the power of rulership through rituals of mass sacrifice that included various individuals, ferocious animals, and many precious offerings. The offerings were, in many cases, buried without signs of having been used and may have been curated for many years beforehand (Sugiyama and Cabrera Castro 2007, 2017; Sugiyama and López Luján 2007).

Stage 4 of the Moon Pyramid was a monumental structure, erected at the time of city-wide grand renovation. The standardized *talud-tablero* form, based on previous versions developed in the Puebla–Tlaxcala region, was applied for the first time at Teotihuacan, contemporaneous with its use on the Feathered Serpent Pyramid. Burials 2 and 6, discovered at different locations and heights within the Moon Pyramid, meticulously materialized cosmology. Offerings included thirteen individuals in total and many fierce animals including pumas, wolves, rattle snakes, and eagles. All were sacrificed and carefully set at the four directions, four corners, and the center (N. Sugiyama 2014). This large-scale dedication ritual was apparently carried out to animate the artificial sacred mountain (Stage 4) at the heart of the pyramid, while the monument was still

being constructed. Thousands of workers, and likely a mass of public spectators, would have witnessed its grand scale of performance and been impressed by the rituals executed under the direction of the city's powerful leaders.

One of the most noteworthy factors in the Moon Pyramid dedicatory burials (Fig. 8.7a) was the emphasis on water symbolism and the female gender. For example, at the exact center of Burial 2 was a large greenstone female figure, standing on a large pyrite disk facing west (Fig. 8.7b). Without a doubt, water, female fertility, and perhaps agriculture formed a key symbolic complex at the Moon Pyramid. Reinforcing this symbolism, a colossal sculpture of the water goddess (now on view at the National Museum of Anthropology in Mexico City) was found on the western slope of the Moon Pyramid, as if it had originally stood on the top of the pyramid. Another sculpture of smaller dimensions was discovered in the Moon Plaza, probably representing the same deity. This huge open space was suffused with water symbolism, which was underscored by the channeling of this liquid in the central shrine of the Moon Plaza in addition to the other water-related features recently discovered by Verónica Ortega (personal communication, 2016). This interpretation of the Moon Pyramid is consistent with the evidence from the TMU study, summarized above, and indicates that the Moon Pyramid referenced a suite of associations with water, the rainy season, female fertility, agriculture, the phases of the moon, and – in conjunction with Cerro Gordo – perhaps the earth, or terrestrial sphere, as well.



8.7. Moon Pyramid dedicatory burials: (a) Plan of Burial 2; (b) Anthropomorphic figure (30.6 cm height) found at the center of Burial 2. © Moon Pyramid Project

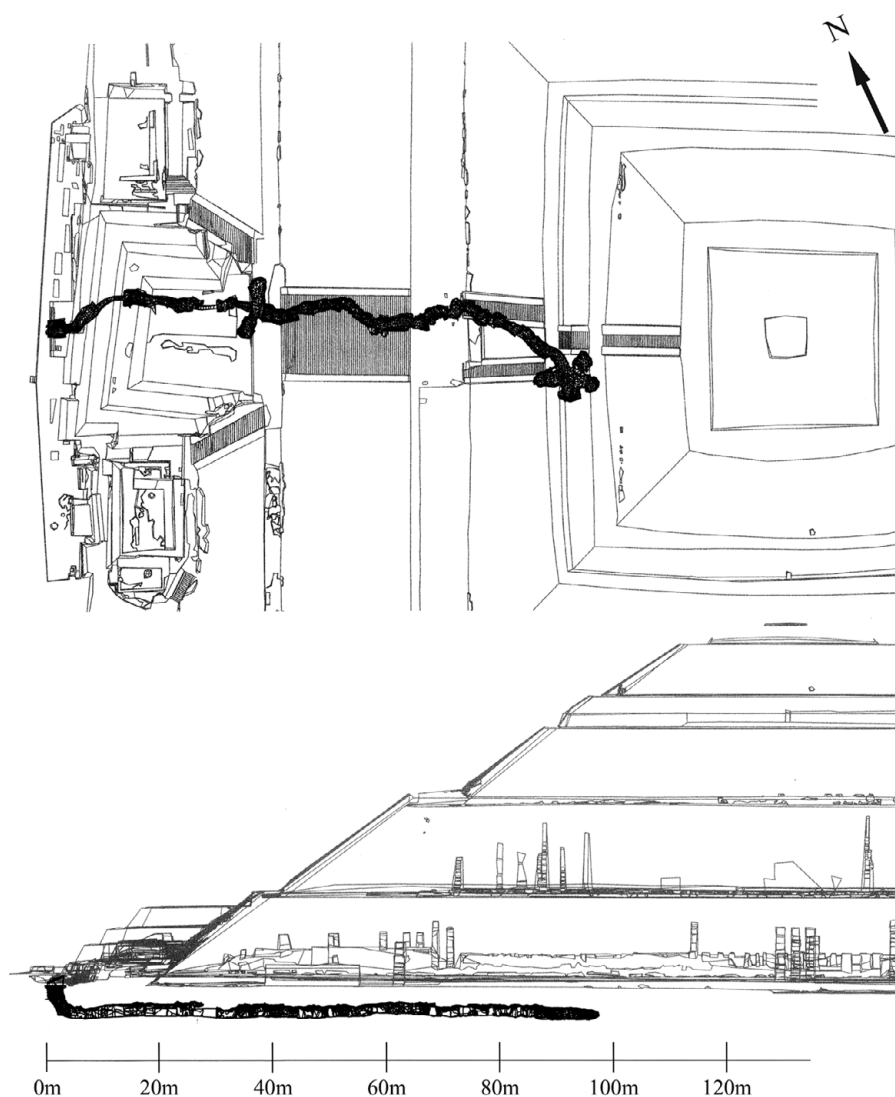
The Sun Pyramid

After more than one century of intermittent explorations (Almaráz 1865; Batres 1906; Bernal 1963; Matos 1995), the Sun Pyramid was recently investigated by an Instituto Nacional de Antropología e Historia (INAH) project under the direction of Alejandro Sarabia (Sugiyama and Sarabia 2011). Sarabia intensively excavated the outside of the pyramid including the surrounding large platforms and its main plaza, while Nawa Sugiyama and I worked together on re-exploring the interior of the structure. Here, I only discuss the exploration of the ancient tunnel often referred to, inaccurately, as the “sacred cave” found under the Sun Pyramid (Millon 1981). In 1971, in the main stairway of the Sun Pyramid, a pit was accidentally discovered that was linked to a long tunnel. Jorge Acosta and his team investigated the interior of this tunnel, located 6.5 m under the level of the plaza. The tunnel, which revealed extensive evidence of ancient looting, continued horizontally 102 m to the east into the interior of the pyramid (Fig. 8.8).

Linda Manzanilla and others have demonstrated that the “sacred cave” is actually a tunnel made by the ancient Teotihuacanos to extract materials for building construction and to use for rituals (Manzanilla 2009; Manzanilla et al. 1989, 1994). Conducting a series of magnetic studies in the environs of the city, Luis Barba (2009) found that concentrations of basalt and volcanic scoriae were located beneath the surface and exploited by the Teotihuacanos, their removal leaving clear traces on the terrain. Based on these results, Barba concluded that no process of natural formation could explain the presence of the cave at the base of the Sun Pyramid.

We explored the “sacred cave” archaeologically, excavating stratigraphic pits in its interior, in order to clarify its significance and function and to develop a three-dimensional map of it (N. Sugiyama et al. 2013; see also Sload 2015 and N. Sugiyama et al. 2018). The tunnel had been closed completely with a series of thick walls facing the entrance. These walls blocked access to the tunnel, as if the builders wanted to seal inside something very important, such as a person’s body or incinerated remains. The middle portion of the walls, however, was later destroyed by looters. It is logical to infer that this tunnel originally served as a royal tomb prior to the abandonment of Teotihuacan. But the looting of the interior and extensive and excessive disturbance of the ancient tunnel has made it difficult to confirm this interpretation.

Nevertheless, it is obvious that the Sun Pyramid was directly linked both symbolically and physically to governmental power at Teotihuacan, through construction activity and possible funerary rituals carried out in the ancient tunnel. In fact, the placement of royal tombs underneath monuments or elite structures was common throughout ancient Mesoamerica, as evident at Monte



8.8. Plan and profile of the ancient tunnel under the Sun Pyramid. AutoCAD map by Moon Pyramid Project. © Moon Pyramid Project

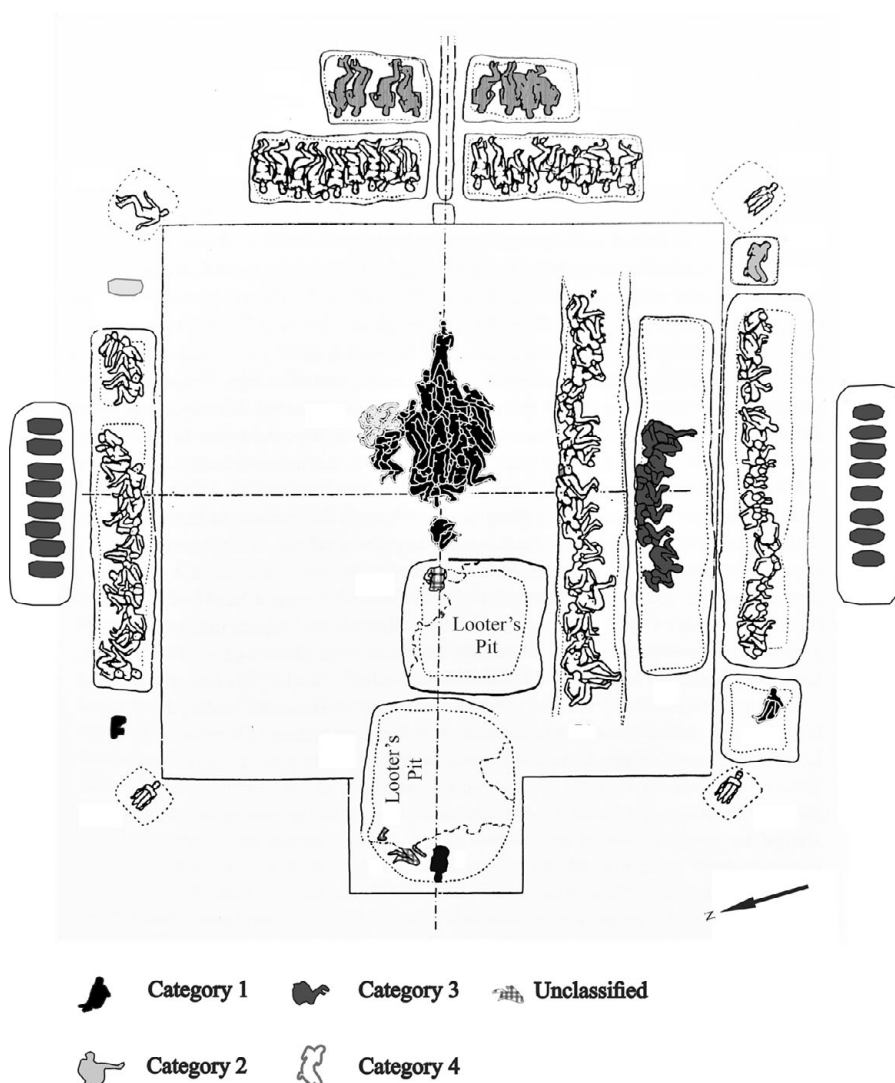
Albán, Kaminaljuyu (see Arroyo, [Chapter 6, Fig. 6.9](#)), and in the lowland Maya region. The ancient tunnels under the Sun Pyramid and the Feathered Serpent Pyramid paralleled royal tombs prepared under monumental constructions in other regions, albeit at a much larger scale than any instances we know of elsewhere in Mesoamerica. If this scenario holds true, it indicates that strong individual-centered rulership controlled the city-wide construction program and the emerging Teotihuacan state. Recent information concerning a very similar ancient tunnel beneath the Ciudadela plaza and Feathered Serpent Pyramid, described below, also supports this interpretation.

Numerous sculptures found around the Sun Pyramid also speak to the symbolism of this great structure. The varied iconography of the carvings indicates that the Sun Pyramid was a place where calendrical rituals were performed, including the New Fire ceremony, or *xiuhmolpilli*, which was generally carried out by rulers to celebrate the fifty-two-year Calendar Round cycle. Numerous monumental sculpture fragments represent year bundles, felines, and fire god braziers, another one of which was recently discovered at the top of the Sun Pyramid, giving credence to this idea (Fash et al. 2009). Thus, the Sun Pyramid was very likely the spot where ceremonies linked specifically to cosmic divisions of time and space were celebrated.

The Feathered Serpent Pyramid and the Ciudadela

The Ciudadela and the Feathered Serpent Pyramid were extensively explored by the project headed by Manuel Gamio (1922) between 1917 and 1922, and later investigated by the Proyecto Arqueológico Teotihuacan 1980–1982 of INAH, directed by Rubén Cabrera Castro (Cabrera Castro et al. 1982a, 1982b, 1991a). As a part of this latter project, the Feathered Serpent Pyramid was intensively excavated by Cabrera and Sugiyama (1982; Sugiyama 1989). The Proyecto Templo de Quetzalcóatl intensively re-explored the monument in 1988 and 1989 under the coordination of Cabrera Castro, Cowgill, and this author (Cabrera Castro et al. 1991b). More recently, Sergio Gómez and Julie Gazzola have conducted systematic excavations of the Ciudadela Plaza, including the ancient tunnel found beneath the plaza and the Feathered Serpent Pyramid (Gómez 2017). According to the data gathered to date, the Ciudadela experienced, apart from small-scale modifications, three main stages in its construction: the pre-Ciudadela phase previously discussed, the phase in which the Ciudadela and Feathered Serpent Pyramid were constructed, and finally the phase when the Adosada Platform was built (Fig. 8.2) (Gazzola 2009; Sugiyama 1998).

The monument of the Feathered Serpent Pyramid represents one of the most ambitious works in Mesoamerica, and it required an enormous concentration of human power to exploit the mines, transport the construction materials, and build the commemorative structure (Barba and Córdova Frunz 2010; Murakami 2010). Tombs, containing more than 137 warrior-priests sacrificed and buried with abundant offerings, were also prepared in the interior and exterior of the pyramid, which I interpreted as mass offerings dedicated to the monument itself (Fig. 8.9) (Sugiyama 2005). The ritual event undoubtedly drew the attention of many communities from the farthest reaches of Mesoamerica, not only for the grand scale of the structure and the rituals carried out in association with it, but also for the innovative symbolism it expressed, which revolved around the Feathered Serpent deity, Venus



8.9. Plan showing the spatial distribution of burials discovered at the Feathered Serpent Pyramid. Four categories were identified based on the attributes of individuals. The size of the graves is enlarged out of proportion to the pyramid so that individual bodies are visible. Drawing by Jamie Borowicz, interpreted by Saburo Sugiyama

warfare, the rain-god “Tlaloc” complex and, especially, the preeminent power of the leaders who directed the project (Sugiyama 2005; cf. Taube 1992). The proclamation of divine authority around 200–250 CE was captured not only in the monumental architecture of the Feathered Serpent Pyramid and the sculptural program on its façade, but also in the massive burials that must have taken years to prepare and finally integrate into the construction. The Ciudadela seems to have been a sacred precinct of maximum authority for the state, where Teotihuacan leaders repeatedly boasted their religious-political

power through rituals of human sacrifice with a strong emphasis on institutional militarism (Sugiyama 2005).

The construction stage of the Adosada Platform, built around 350 CE, represented a substantial shift in religious ideology and/or a transformation in the sociopolitical organization of the Teotihuacan state, which coincided with the construction of Stage 6 of the Moon Pyramid. The central portion of the front façade of the Feathered Serpent Pyramid was masked by the Adosada Platform in a distinctive way, while the remaining facades on the north, east, and south were intentionally destroyed (Sugiyama 1998). The interior of the monument was looted through a tunnel dug diagonally from the southeast corner toward the center in the late fourth century CE when Teotihuacan was still an active city. Two burial complexes that apparently contained sacrificial victims were looted and almost entirely disturbed inside the looters' tunnel. The change and partial destruction of the facades was a drastic measure; nevertheless, the Ciudadela continued to function until the fall of the Teotihuacan state sometime in the sixth century CE, as suggested by later superimposed constructions and associated late-phase ceramics.

Recent excavations headed by Gómez are paving the way for new perspectives on the symbolism and function of the Ciudadela (Gómez 2017). In front of the Adosada Platform a deep vertical pit was found. The pit, whose diameter is 83 cm, is connected to a 103 m long horizontal tunnel dug beneath the Feathered Serpent Pyramid. Although explorations by Gómez are still in progress, I suspect that this tunnel also originally functioned as a royal tomb for the Teotihuacan leaders' families. If this tunnel contained burials of leaders, it would make sense to interpret the large number of sacrificed warriors found in association with the pyramid as being dedicated to the dead leaders once buried beneath the pyramid. All sacrificed individuals buried outside the pyramid, and adorned as warriors or priests, were found in a sitting position facing outward as if they were guarding something behind them (toward the interior of the pyramid). The individuals found inside the pyramid were laid down on their backs as if they, too, were guarding something behind (or under) them, below the pyramid. According to Gómez (personal communication, 2016), the end of the ancient tunnel is located precisely under the central point of the pyramid, about 17 m below the central burial (Burial 14). This theory of sacrificial retainers still needs to be confirmed with excavation data, but extensive looting activities in the tunnel and the possibility of the cremation of high-status individuals by ancient Teotihuacanos may make it difficult to precisely identify the original function of the ancient tunnel as a royal grave. The data from excavation and material analyses, the monumentality of the Feathered Serpent Pyramid and its impressive sculptural program (which may have commemorated the accession ceremony of supreme leaders), along with the mass-sacrificial rituals of warriors/priests with

abundant offerings, together point to the idea that the (cremated?) bodies of rulers were once deposited in the ancient tunnels. The rulers were likely those who planned and executed the city-wide construction programs described, so the monuments themselves were in part symbolic of rulership. The Ciudadela would have been a public ceremonial enclosure as well as the cradle of the political and military power of the Teotihuacan government, symbolically and physically expressed by means of the monumentality of the Feathered Serpent Pyramid and the larger Ciudadela precinct.

CONCLUDING THOUGHTS

According to the data from the central zone, Teotihuacan was created by people who strategically chose its location and constructed a sacred precinct materializing their vision of the cosmos. The nature of early urbanization at Teotihuacan can be described as fundamentally symbolic and inextricably related to a human need to comprehend astronomy, nature, and humans in time and space. The people who designed the city integrated at least three calendar systems – the 365-day solar calendar, the 260-day ritual calendar (which was also related to lunar cycles), and the Venus cycle. In so doing, they transformed the valley into a sacred landscape that exerted a powerful attractive force over a very broad area.

The 260-day ritual calendar, which approximates the human gestation period, is a distinctive calendar that seems to have integrated astronomical and human cycles harmoniously. It was conceptually combined with the solar calendar to create a larger cycle of 52 solar years ($365 \times 52 = 260 \times 73 = 18,980$ days). This 52-year Mesoamerican large cycle or “century,” like the 60 solar year cycle in ancient East Asian civilizations, may have represented a human’s average life expectancy or perhaps the onset of menopause. The northern section of Teotihuacan served to visualize both the solar or natural cycle and a ritualized human life cycle. The sacred space of the precinct was linked to astronomical movements and the human body in order to materialize a newly elaborated worldview, which celebrated the leaders who controlled the esoteric knowledge needed to produce it.

Within this city-wide program, the three principal monuments at Teotihuacan represented distinct primordial factors. The Sun and Moon pyramids together symbolized a complementary duality in which the Sun Pyramid represented fire, heat, light, the dry season, masculinity, sky, and the sun, whereas the Moon Pyramid symbolized water, the rainy season, femininity, land, and probably the moon. These meanings were made visible to pedestrians along the Avenue of the Dead: the Moon Pyramid together with Cerro Gordo – referred to by modern local people as “Montaña de Agua” (Water Mountain) – was associated with the rainy season, when the sun

gradually moved northward (toward the Moon Pyramid). In contrast, the Sun Pyramid, situated to the south of the Moon Pyramid, symbolized heat, fire, dryness, sky, and reflected the sun's southwardly movement during the dry season. This fundamentally Mesoamerican division of time and space can be observed as well at the main pyramid of the Aztec capital, Tenochtitlan, established more than eight centuries after the collapse of Teotihuacan. There, the shrine dedicated to the rain god Tlaloc at the Templo Mayor (Great Temple) was located on the north side of the pyramid and symbolized the rainy season, water, and fertility. By contrast, the shrine dedicated to Huitzilopochtli, the principal Aztec deity of the sun and warfare, was located on the south side and symbolized fire, heat, the dry season, sky, masculinity, warfare, and the sun itself. This primordial spatial division, and its relationship to agricultural cycles and human life more generally, can still be seen in modern native communities like those of the Huichols in Mexico (Neurath 2002).

The Avenue of the Dead can likewise be divided into two sections. The section bounded by the complexes of the two main pyramids is flat and likely was used for processional rituals related to the combined solar and ritual calendars. According to my TMU study, this section represented the calendrical cycles related to the movement of the sun and the moon. The portion of the Avenue between the Sun Pyramid and the Ciudadela differs because it is divided by transverse platforms and a grand-scale canal; it may have been related to the combined solar and Venus cycles. Thus, the central ceremonial zone of the city along the Avenue of the Dead fundamentally symbolized the passage of time and celestial phenomena, both precisely computed, while simultaneously serving as a central space for ritual and interaction. Large complexes along the Avenue may have functioned as loci for ritual performance of the passage of time, while also hosting state administrative work and the diverse activities related to material production/distribution. The urban plan was formulated for participants to physically congregate and to create intellectual, religious, and symbolically important products as well as objects for daily life.

We have long sought to describe how the city of Teotihuacan was shaped and transformed through time and what the impetus was for the creation of the massive ceremonial center. Many Teotihuacan archaeologists have focused on the environmental conditions, and viewed the city's location as strategically favorable for subsistence, for the domestication of plants and animals, for the manufacture of ceramics, for obsidian production, as well as for its accessibility to other locally available resources. They have analyzed economic networks related to tribute, exchange, or market economies, and described evidence for technological innovations, religion, astronomical or other scientific knowledge, sociopolitical organizations, or interactions with other communities and distant cities. The urban formation in Teotihuacan involved all of these

many factors, just as other contemporaneous and earlier cities were also created due to multiple factors. In fact, the economic and social links among the many early cities and states of Mesoamerica must have been critical for the general process of urbanization in Mesoamerica. In the case of Teotihuacan, interactions with distant cities like Monte Albán or Maya cities, both lowland and highland, have been documented archaeologically and the evidence for such interactions continues to grow (Arroyo, [Chapter 6](#); Braswell 2003; Hirth et al. 2020; Pendergast 1971; Sugiyama and López Luján 2007; Sugiyama and Sugiyama 2021). It is, however, difficult to isolate the main causal factors for the formation of a city if we only trace commonly shared features. They are not sufficient to explain the underlying processes that fueled urbanism and caused Teotihuacan to develop at such a large scale in the location where it did.

In order to produce a better explanatory model for urbanization at Teotihuacan, we must also understand its uniqueness. Those unique aspects include the scale of its impressive monuments and its layout, both of which endured throughout the city's history. The quality of urban life, or its urbanity (see Guernsey and Strauss, [Chapter 9](#)), was an attractive force both to residents and outsiders. Teotihuacan's innovative intellectual tradition, manifested materially, included ideas about astronomy, geology, ecology, nature, the human body, and mathematics. Mural painting, sculpture, music, and highly advanced technologies in ceramic and obsidian production all surged at this time. Writing appeared for the first time in the Mexican highlands at Teotihuacan, which presumes a sophisticated system of education, communication, and intricate social organization.

Recent archaeological evidence indicates that the Avenue of the Dead, the Moon Plaza, the Sun Pyramid complex, and the Ciudadela were meticulously calculated with a master plan by 200 CE, not only for the city's inhabitants, but also to receive countless pilgrims, merchants, and officials from diverse ethnic groups who visited the city and would have been awed by the impressive built environment. Teotihuacan represents the grand-scale materialization of an innovative worldview, conspicuously constructed in the symbolic city layout and accomplished under a consolidated leadership imbued with military might. Its multi-ethnic and multi-functional urban society grew rapidly under the control of strong political entities that continued to refine established expressions of power through ideologically innovative programs, as suggested by repeated modification of the monumental structures. I believe that the repeated innovations of the major monuments were a consequence of the need to produce continuous intellectual stimulation so as to make urban life appealing.

The data summarized above suggest that one of the primordial concerns of Teotihuacan leaders was the materialization of their worldview and the development of the intellectual strategies and material technologies needed to

accomplish it. I believe that the varied forms of knowledge, religious thought, highly advanced engineering, and craftsmanship, combined with networks of trade and exchange with distant regions, enabled Teotihuacan leaders to carry out a project of such grand scale. That said, we still have only a vague idea concerning the ethnic identity of the individuals who created such a compelling urban center. We do not know whether local communities or an immigrant group conceived the plan. Recent research simply suggests that, after a short period of rapid growth of the ritual center from the Patlachique phase to the Tzacualli phase, Teotihuacan became a religious and intellectual center during the first and second centuries CE, materializing a new worldview comprising novel ideas but also those imported from distant centers. By the early third century CE, Teotihuacan was consolidated into a hierarchical urban society of unprecedented scale. This was the era of monumental constructions, which we can see as the culmination of successfully centralized political power.

From the vantage point of the Mexican highlands, the Late Formative period can be characterized as an era in which extraordinary centers emerged with innovative ideas and technologies, products of a developing intellectual tradition that included calendrical complexes, writing, and a religious/philosophical understanding of the relationship between nature and humans. Teotihuacan may have contributed to the trajectory of Mesoamerican civilization by its own unique and explicit materialization of 260-day ritual calendar systems, the Venus cycle, an array of mathematical and scientific achievements, as well as the development of new resources, technologies, and intricate sociopolitical organizations. These conceptual and material accomplishments were fueled by regional interactions that were far more intensive than we previously thought, and which, combined with local innovation, served to make Teotihuacan an attractive and successful urban center.

ACKNOWLEDGEMENTS

I would like to sincerely thank Michael Love and Julia Guernsey for their substantial assistance in editing the text and structuring the theoretical framework of the early urban traditions in Central Mexico.

CHAPTER NINE

ART AND URBANITY IN LATE FORMATIVE MESOAMERICA

Julia Guernsey and Stephanie M. Strauss

THE RESHAPING OF THE MATERIAL WORLD WAS AN ESSENTIAL PART OF the process of urbanization in Late Formative Mesoamerica, as it was in other parts of the ancient world. These material reconfigurations took many forms, each inextricably entwined with the others in the matrix of urbanism. Monumental art was one of the most prominent and visually accessible vehicles through which Mesoamerican elites configured new urban identities. In fact, recognition of the vital role that monumental imagery plays in establishing visual codes is, according to Robert Maxwell (2007), art history's major contribution to the study of urbanism. But this fundamental premise – that monumental art is an integral aspect of urbanism's "three-dimensional features" and central to its "expanded visual discourse" – hinges on the understanding that art was more than an epiphenomenal accessory of urbanism or a decorative afterthought inspired by city living. We take as a given, in this chapter, that images did more than occupy physical space: we view image making as a recursive act that both reflected and actively created the urban landscape. To borrow Maxwell's words, art generated meaning and established the visual codes that were fundamental to the expression of new urban identities. Among the first modern scholars to recognize the role of art in the "urban revolution," or the complex processes of economic and social change that culminated in the development of the first cities, was V. Gordon Childe (1950). While of enduring value, Childe's observations concerning art and urbanism benefit from new and sustained scrutiny of the complex interface between artistic programs, the built environment, and the

goals and ideological agendas of the ruling elites who commissioned monuments in Late Formative Mesoamerica.

In this chapter we consider urbanism from the vantage point of the rich corpus of Late Formative (400 BCE–250 CE) sculpture found at sites situated along the Pacific slope and in the adjacent Guatemalan Highlands (see Love and Rosenswig, [Chapter 7](#), [Fig. 7.1](#)). This period witnessed an explosion of sculptural creativity and production across Mesoamerica. Monumental sculpture in the preceding Early (2000–1000 BCE) and Middle Formative (1000–400 BCE) periods was, relatively speaking, far rarer (Clark et al. [2010](#)). Although cities like San Lorenzo and La Venta along the Gulf Coast (see Pool and Loughlin, [Chapter 3](#)), as well as Chalcatzingo in Morelos, Mexico, and Tak'alik Ab'aj in Guatemala, were the loci of vibrant sculptural traditions during these earlier eras, monumental sculpture made only a spotty appearance elsewhere in Mesoamerica. With the exception of Tak'alik Ab'aj (Schieber de Lavarreda and Orrego Corzo [2010](#): 195), this was certainly the case in south-eastern Mesoamerica, where collections of Early and Middle Formative sculpture are quite modest in comparison to the breadth of sculptural production in the ensuing Late Formative period (Clark and Pye [2000](#)).

The Late Formative surge in the quantity and diversity of sculptural forms occurred at a historical juncture that also saw significant social transformations. While certain questions pertinent to urbanism are best addressed through the methods of archaeology – the sizes of cities, estimations of population density, and absolute dating, to name only a few – others benefit considerably from recognition that art was vital to visualizing an urban identity. That said, there is much work to be done in order to appreciate more fully the contribution of monumental sculpture to the fabric of urbanism in Mesoamerica (but, for an early model, see Townsend [1979](#)). This is particularly true for the Formative period, and is perhaps most acute in the study of early monuments inscribed with hieroglyphic texts.

Inadequate attention has been paid to the role of hieroglyphic writing in visually and conceptually structuring Formative period urbanism (though see Urcid [2001](#) for an exception), due in great part to an alternate emphasis on questions concerning the linguistic affiliation and decipherment of early texts (Houston and Coe [2003](#); Justeson and Kaufman [1993](#); Lacadena García-Gallo [2010](#); Méluzin [1995](#); Mora-Marín [2010](#)). To our minds, however, the advent of inscribed stone monuments was critically linked to the powerful forces of change in Formative Mesoamerica. While the murky origins of Mesoamerican writing lay in the Early to Middle Formative era, the Late Formative period bore witness to the diversification and regionalization of text-and-image practice across the Mesoamerican landscape (Strauss [2013](#), [2015b](#)). In Late Formative monumental sculpture we also begin to see, for the first time, kingly bodies flanking hieroglyphic passages as on Tak'alik Ab'aj Stela 5 ([Fig. 9.1](#)), and hieroglyphic passages surrounding kingly bodies as on La Mojarra Stela 1 ([Fig. 9.2](#)), developments that are central to our arguments below.

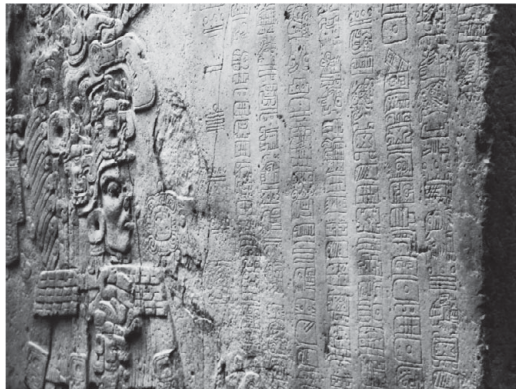


9.1. Tak'alik Ab'aj Stela 5, showing two individuals on either side of a hieroglyphic inscription. Photo courtesy of the University of California Berkeley Abaj Takalik Project

We limit ourselves here to a discussion of the so-called southeastern writing systems (Houston 2004) and their relationship to monumental sculptural programming, though we recognize that these questions are equally pertinent to the development of Formative period urbanism in Oaxaca as well (Joyce, Chapter 2; Urcid and Joyce 2014). Speakers of many languages participated in this era of visual-verbal experimentation, and new modes of representation arose to better accommodate the needs of diverse text-and-image programs. Hieroglyphic writing was, we argue, an expressive practice and recursive actor in the visual culture of Late Formative urbanism/s, and early inscriptions on stone were utile signifiers of locally salient understandings of cosmology, ideology, and sociopolitics. Yet linguistic analysis alone cannot fully reveal the formal ways in which text, image, and material substrate engaged with and



A



B

9.2. La Mojarra Stela 1: (a) View of monument with individual standing to the left; (b) Detail of hieroglyphic inscription on right half of monument. Photo (a) by Michael Love; photo (b) by Guernsey

indexed one another. Ultimately, even the most grammatically precise transcription of an ancient hieroglyphic text – and, in truth, we can read very little of the Formative hieroglyphic corpus (Pérez de Lara and Justeson 2006; Saturno et al. 2006; Strauss 2015b) – remains *semantically* illegible without a thorough treatment of the object's material substrate, image program, and archaeological and social contexts. This point pertains not only to modern scholars, but also ancient viewers of inscribed monuments, who experienced them in ways we can only approximate. While evidence suggests that only a fraction of the ancient populace – and an elite one at that – was literate in ancient Mesoamerica (Houston 2008; Jackson 2009), it is also clear that hieroglyphic texts were experienced in concert with an array of other, more readily accessible, communicative mediums. This point is central to our arguments: the texts and images of Late Formative monuments should not be treated in isolation, nor considered separate from their material substrates, spatial relationships, or performative contexts. Rather, the monuments should be understood as objects whose messages reverberated in any number of ways, eliciting what was undoubtedly a variety of intellectual and sensory responses, some more accessible than others. In commissioning these new – frankly, even experimental – inscribed stone monuments, Mesoamerican elites were playing with the very idea of what it meant to be urban in the Late Formative period, structuring expectations for generations to follow.

What guides us in this study is the belief that the explosion of sculptural diversity that characterizes the advent of the Late Formative period along the Pacific slope was novel in the history of ancient Mesoamerica. Moreover, the new set of art forms, messages, textual components, and contexts that were

part of this impressive sculptural experimentation must have been met with a range of responses. With all of its innovations to the ways in which information was both presented and received, Late Formative art likely materialized a number of challenges to viewers, both reflecting and giving form to their new lived experience as urban citizens. It surely did the same to the artists who were charged with finding artistic solutions to the transformations posed by urbanism, as well as the rulers who, presumably, commissioned the monuments. Yet a certain amount of conservatism also mediates the corpus of Late Formative art, and serves as a counterpoint to its more profound departures. References to earlier cultures, hieroglyphic forms, and images were surely deliberate, carrying with them messages of tradition, stability, and longevity. This chapter explores some of these tensions, at least as best as we are able for a period that lacks primary documents beyond what the monuments and their larger archaeological context can provide. What emerges from this analysis is, we hope, some insight into the visual impact of Late Formative urbanism.

LATE FORMATIVE URBANISMS

Urbanism was visualized across Late Formative Mesoamerica in multiple ways, and the sculptural explosion that transpired along the Pacific Coast was paralleled by divergent, but equally effective, modes of artistic production in other regions. On the Pacific slope and in the adjacent Guatemalan Highlands, stelae – the tall, upright stones whose surfaces were often carved and which constitute the focus of our study – were frequently paired with altars and accompanied by a variety of other sculpted forms that include thrones, boulder sculptures, pedestal sculptures, and fountain stones, as well as an array of plain, or only minimally modified, stelae and altars (Guernsey 2012, 2020; Guernsey et al. 2010; Love 2010; Miles 1965; Parsons 1986). Carved stone sculptures were also erected in the Maya Lowlands, and shared their urban setting with even more spectacular architectural facades that bore massive polychromed stucco masks as well as mural programs, which were ensconced in the interiors of structures (Estrada-Belli 2011; Saturno 2009). In Oaxaca, sites such as Monte Albán and Dainzú focused on the stone slabs that formed the revetment walls of architecture as a primary surface for artistic expression (Joyce, Chapter 2; Scott 1978; Urcid 1994b, 2011b; Urcid and Joyce 2014). While hieroglyphic texts appeared on many of these different surfaces, approaches to textual aesthetics and organization varied widely between Zapotec, proto-Maya, and Isthmian (or epi-Olmec) scripts, and shifted within them according to context and material substrate (Strauss 2013, 2015b, 2018a, b). Stated simply, the corpus of Late Formative Mesoamerican art and architecture was by no means homogeneous, which indicates that urban visual identities were configured in an endless variety of ways during this period.

Even along the Pacific slope, it would be inaccurate to suggest that there was a uniform way of articulating an urban identity. Although we focus in this

chapter on the messages of carved stelae that were erected at sites such as Izapa and Tak'alik Ab'aj, other Late Formative sites of significant scale eschewed sculpture almost completely. For example, El Ujuxte, located nearly equidistant between Izapa and Tak'alik Ab'aj, has only three uncarved altars (Guernsey and Love 2005; Love 2010; Love and Balcárcel 2000: 65; Love and Rosenswig, Chapter 7). Instead, what visually dominated the center of El Ujuxte were the aesthetics of its architectural organization. The site was laid out in a grid pattern, with the vast majority of structures oriented along two axes. This remarkably ordered symmetry anticipates that of Teotihuacan, the site that dominated the Valley of Mexico during the Classic period and also utilized strictly controlled formal planning to convey messages of social order (see Sugiyama, Chapter 8). Even when one zeroes in on a single region, as we are doing in this chapter, it becomes clear that physical expression of an urban identity could vary enormously. It is wise to recognize these contrasting creative expressions, and concede that we cannot do justice to them all in a single chapter. This essay, then, is only the opening salvo in what is a much more complicated and ongoing discussion of how urbanism was visualized during the Late Formative period and the role of monumental sculpture and inscribed texts in its creation.

Urbanism and Urbanity

Our focus is on one of the dominant themes of Late Formative carved stelae: the expression of political authority and its mythological and supernatural justification. This is well exemplified by Izapa Stela 4 (Fig. 9.3) and Kaminaljuyu Sculpture 11 (Fig. 9.4), where elite individuals (presumably rulers, a point we return to below) are portrayed in dynamic postures, wearing elaborate bird costumes that reference broadly shared creation mythologies concerning a supernatural avian deity (for summaries of these arguments see Guernsey 2006: 95–116). Late Formative monuments such as these, which present images of rulers in mythic contexts or with supernatural attributes, are best thought of as “cosmological”: they engaged with pictorial accounts of universal order – the stuff of myth and religion – but were equally laden with concerns for the proper ordering of people in time and space – the stuff of politics and economics (Guernsey 2021). By thinking of the monuments as cosmological, one can utilize a conceptual framework for their understanding that encompasses multimodal data drawn from their broader social milieu. This conceptual framework also facilitates an exploration of how these monuments functioned within a complex urban framework that was equally engaged with forces ranging from the pragmatic to the abstract.

Late Formative “cosmological” stelae are many and diverse and, truth be told, form an unwieldy assemblage. In an effort to streamline our discussion, we narrow our focus to only those stelae that engage with the topic of political



A



B

9.3. Izapa Stela 4, showing an individual standing on a terrestrial band and, above, a bird-costumed figure descending from a celestial band. Photo (a) by Michael Love; drawing (b) by Ajax Moreno, courtesy of the New World Archaeological Foundation

authority and its justification through the presentation of the kingly body. This focus provides the opportunity to think about how rulers, in conversation with the skilled artists and scribes who carved the monuments, chose to represent themselves and/or the office of rulership in Late Formative urban centers. More than that, it allows us to see how these representations of kingly bodies – corporeally enacting roles of leadership, ritual, and supernatural exchange – ordered the physical space of Late Formative cities along the Pacific slope. This approach is, admittedly, biased toward an elite vantage point, and privileges the domain of “high culture” and the objects wielded exclusively by rulers and their elite cohort in order to define themselves as qualitatively distinct from non-elites (Baines and Yoffee 1998: 203; also see Guernsey 2020; R. Joyce 2000). But this bias enables us to ask questions that are key to unraveling the convoluted dynamics of Late Formative urbanism: How did rulers make use of these new urban spaces? What artistic innovations were shared between urban



9.4. Kaminaljuyu Sculpture 11, showing protagonist standing on a terrestrial band and, above, a winged creature descending. Photo (a) by Michael Love; drawing (b) by Lucia R. Henderson

centers, and how did they give form to new communicative networks that were part and parcel of Late Formative urbanism?

The term “urbane,” which traces its roots to the Latin *urbanus*, “belonging to a city,” is useful for contemplating these complex relationships. The *Oxford English Dictionary* (2015; also see Steinmetz 2009: 233) notes that the term encompasses those who pursue the ideas or sentiments characteristic of a town or city life, or possess the qualities of action befitting an elegant, refined, courteous, civil, or sophisticated individual. Yet, in truth, all that is urban is

not necessarily urbane. Any consideration of urbanity conjures the refined aspects of city life, rather than its darker underbelly. The term “urbane” emphasizes cultured sophistication in contrast to “rustic” country life, but neglects the gritty realities that, inevitably, accompanied urban living.

We suggest that the messages connoted by the term urbane – of refinement, education, literacy, status, and sophistication – were central to the goals of Late Formative sculptural assemblages. The monuments were intended to communicate an urbane identity that, while inseparable from the city, was clearly elevated above the ordinary: the monuments do not reflect the experiences of average urban residents, but instead foreground themes that validate the authority of the rulers who erected them. While at times grounded in a local vernacular, these themes nevertheless reverberated across the landscape of Late Formative Mesoamerica, part of a vibrant elite communication sphere that transcended linguistic and ethnic boundaries (Guernsey 2006, 2011). Looking closely at these images from a variety of sites provides insight into the shared messages, shared vocabularies of form, and shared ideas of elite urbanity during the Late Formative period.

We begin by briefly summarizing the evidence that enables us to move forward with the assumption that Late Formative monumental sculpture was a privilege of ruling elites. From there we look at some of the major transformations in sculptural form that characterized the transition into the Late Formative period, when the south coast of Mesoamerica witnessed the advent of state formation and the development of the first truly urban centers (Love 2007, 2011a, b; Love and Rosenswig, Chapter 7). These sculptural transformations, in our opinion, cannot be teased apart from other innovations of the time, not the least of which was the increasing tendency to contextualize the kingly body within mythic narratives or alongside hieroglyphic inscriptions, which in and of themselves signified specialized and restricted knowledge.

ART AND PRIVILEGE IN MESOAMERICA

The premise that Late Formative monumental art was the prerogative of kings relies in part on circumstantial evidence drawn from other regions and periods in Mesoamerican history. During the Classic period (250–900 CE), we have compelling evidence that Maya sculpture was carved and inscribed by artists who were themselves members of the elite class. When the names of artists appear on monuments or finely painted ceramic vessels, they sometimes carry elevated titles that imply an elite status and, in a very few cases, a noble birth (Coe and Kerr 1997; Miller and Martin 2004: 121; Reents-Budet 1994, 1998; Stuart 1989). Recently, Stephen Houston (2016) translated a title linked to artists, *itz'aat*, as “wise” or “skilled person,” noting that, on sculptures at the lowland Maya sites of Ceibal and Itsimte, hieroglyphic statements concerning the act of carving were linked to acts of “speech and titles of knowledge and discernment.” Archaeological data support this link. At the site of Aguateca,

for example, Kazuo Aoyama (1999) and Inomata documented significant evidence of artistic production in noble residences, leading Inomata (2001b: 329) to conclude “that artistic production was a common activity among Classic Maya elites, including courtiers of the highest rank” (also see Fash 1991: 106–III; Reents-Budet 1994: 42–43). Elite women, as well, may have accessed this urbane class more often than is recognized, since art historical evidence points to an ephemeral corpus of embroidered and painted hieroglyphic textiles (Strauss 2014).

There is also evidence for a conceptual link between elite artists and supernatural actors: deities, like elite actors, often were depicted as engaged in the scribal arts (Jackson 2009; Reents-Budet 1998). This association between crafting, nobility, and the divine extended beyond the Maya region, as attested by the Postclassic Aztecs who claimed partial descent from the legendary Toltec people, whom they characterized as skilled artisans (Brumfiel 1998: 147; Inomata 2001b: 331–332). The Aztec ancestral deity figure Cipactonal, furthermore, was a primordial *tlamatini* – a *sabio*, in Fray Bernardino de Sahagún’s (1950–1982) terms, a “sage” or “wise one” – who recreated the entire corpus of painted Aztec codices after their inventory of sacred knowledge was stolen during the migration from Aztlan. This link between deified bodies, wisdom, and the scribal arts paralleled that seen in the Classic Maya world, and similarly extended to the creation of elite urban identities (Strauss 2015a). For example, there is evidence that Aztec nobility, like their Maya counterparts, easily passed into the scribal and skilled artisan classes. In the Codex Telleriano-Remensis, to cite one case, a wife of the *tlatoani* (ruler) of Tenochtitlan is depicted and glossed as a painter of codices, underscoring the permeability between the social spheres of “noble” and “scribe” in ancient Mesoamerica (see Boone 2005).

While evidence indicates that elites were closely engaged with art *production*, the sponsorship and erection of monumental stone sculptures appears to have been, for many centuries, the prerogative of the ruler who, presumably, had a hand in dictating – or at least influencing – the content of the works produced by the scribes in his/her court. This assertion is, however, only inferential, especially as regards the Late Formative period. There is no clear-cut archaeological evidence or hieroglyphic passage that unambiguously proves monumental stone sculpture and its content were the sole prerogative of the king, existing well beyond the unencumbered reach of even the highest members of the royal court. All that we have to go on is the limited textual and iconographic evidence, as well as the archaeological record, which indicate that monumental sculpture served in the interest of the king and, like surrounding architecture, was viewed as an extension of the kingly body (see Guernsey 2020; Henderson 2013; Houston 1998; Taube 1998: 463–464).

Tellingly, perhaps, during the final years of the Classic period when the institution of divine kingship among the Maya appears to have

weakened,¹ there is evidence that nonruling nobles began to assert their own power in the form of carved monuments, which they erected within the confines of their private residences. This seemingly radical act may have been tolerated by kings in an effort to save face and sustain their cities against threatening social, political, economic, and environmental dynamics (Schele and Freidel 1990: 330, 336–345; Sharer and Traxler 2006; Webster 1989). Charles Golden (2010: 373) demonstrated that, in the Usumacinta River region of the Maya Lowlands during the latter part of the Classic period, “the power and authority of client lords had grown such that they were accorded their own inscribed monuments.” As Golden rightly recognized, such extensions of previously exclusive privileges carried a potential threat to history as it had traditionally been written. This loosening of authorial control created the opportunity for competing historical narratives; at the very least, it threatened to fragment the formerly dominant historical narrative or – as we would phrase it, invoking the work of James Scott (1990) – the “official transcripts.” Classic-period rulers seem to have been cognizant of this potential threat, however, and devised various means to combat it (see Golden 2010 for discussion of these strategies).

We can trace some similar dynamics in the centralized control of sculptural production and content back into the Formative period. Ann Cyphers (1999: 165–168) documented that, already by the Early Formative period, workshops dedicated to the re-carving of monuments at San Lorenzo were “‘attached’ both physically and socially to elite patrons.” She further argued that such stone workshops, in which previously carved stones were reworked, attest to the inherent value of the stone itself. Even once a monument had “outlived” its usefulness, as Cyphers phrased it, it was “destined for recycling.”

The Early and Middle Formative distribution of large-scale sculpture also mirrored distinct settlement hierarchies. While the Olmec site of San Lorenzo, for example, has an inventory of 129 stone monuments, lesser settlements surrounding the regional center have significantly fewer (between 8 and 15) (Cyphers 2008). Cyphers demonstrated that certain types of monuments, carved stone thrones in particular, are sensitive markers of the extent and relative hierarchy of Early Formative political authority in the Gulf Coast. At San Lorenzo, massive stone thrones feature a deeply recessed frontal niche from which a three-dimensional figure – most likely a ruler – leans out (see Fig. 9.5a for a Middle Formative throne that exhibits the same type of deeply recessed niche and emerging individual). At San Lorenzo’s subsidiary centers of Loma del Zapote and Estero Rabón, by contrast, stone thrones are significantly smaller and tend to lack this prominent niche. The significance of thrones, or royal seats, throughout the Formative period (Clark et al. 2010: 13–15), played

¹ See Freidel (2008) for discussion of the institution of divine kingship and its expression in art and writing during the Classic period in the Maya region.

out during the Classic period as well, both figuratively and textually. In Classic Maya hieroglyphic writing, the positional root *chum* is integral to hieroglyphic statements of kingly accession. Positionals are a particularly fruitful class of roots in the Mayan language family; they can be derived into adjectives, nouns, or verb phrases, and carry deeply expressive meaning and corporeal connotations. *Chum* encompasses the bodily act and positionality of being seated: To accede to the throne was *chumwaan ti qjawlel*, literally, “to be seated in [the] kingship.” In discussing *chum* statements, Sarah Jackson (2009: 79) concluded that thrones “not only represented a particular perk of elite status, but also served as a materialized reminder of the ritual process through which an individual acceded to a particular office, and thus to a particular locus within a larger hierarchy.”

Evidence from Late Formative sites also suggests that certain types of sculpture, such as stelae with images of kings, at times accompanied by hieroglyphic passages or calendrical glyphs, were the prerogative of rulers at only the most powerful sites (Love 2010). These monuments, as we detail below, invoked key narratives and ideas anchored to representation of the kingly body, which established the ruler’s – and by extension the city’s – urbane identity. But while stelae with images of kings have a markedly limited distribution, other sculptural forms were erected by rulers at both primary and much smaller secondary and tertiary centers. In fact, as Guernsey (2010b, 2012, 2020) and Love (2010) argued, recognition of these different sculptural forms and their relative distribution reveals a multi-faceted role for sculpture in articulating a site’s regional status.

The Sculptural Innovations of Late Formative Urbanism: Narrative and Writing

Already by the Early Formative period, sculpture was situated in careful consideration of the built environment. Cyphers and Anna Di Castro (2009: 28–29) observed that the organization of the colossal heads at San Lorenzo, for example, resulted in a “macro-scene” that served as a historical display of rulers and, perhaps, their respective descent groups. By the Middle Formative, thematic groupings of sculpture at La Venta speak to a growing understanding of the power of sculpture to, in conjunction with architecture, guide viewers, signify particular themes, delimit boundaries, and articulate relationships between political authority and the supernatural world (González Lauck 2010; Tate 2012; also see Love 1999a).

Formative sculpture also reveals remarkable attention to the surfaces of stones and divergent approaches to the act of modifying them. Middle Formative La Venta Altar 5 (Fig. 9.5a) evokes the massive three-dimensionality of its Early Formative sculptural forebears, yet begins to take even greater advantage of flatter, more regularized surfaces that provided a field for detailed, low-relief carving (Coe 1965a; de la Fuente 1973, 1981; Tate 1995).

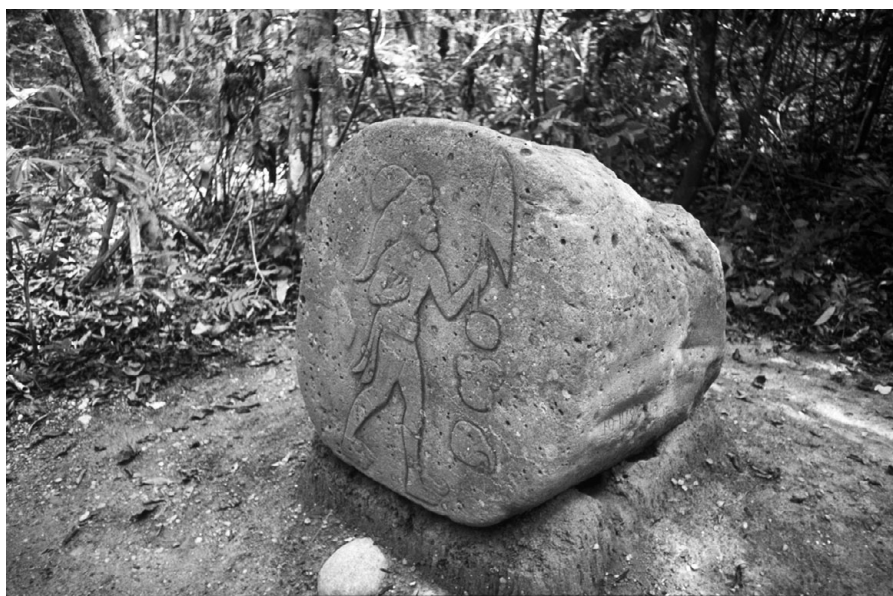
Chalcatzingo Monument 1's (Fig. 9.5b) composition, which communicates a narrative involving supernatural access and the arrival of rain (Grove and Angulo 1987), illustrates an acute awareness of the expressive potential of the rock's natural surface for creating a pictorial field. During the Middle



9.5. Middle Formative monuments: (a) La Venta Altar 5 with protagonist emerging from a recessed niche. Secondary figures carved in low-relief appear on sides of monument; (b) Chalcatzingo Monument 1, showing an individual seated within a symbolic cave from which volutes of mist emerge. Photo (a) by Guernsey; photo (b) by Linda Schele, courtesy of the Foundation for the Advancement of Mesoamerican Studies, Inc.

Formative, monuments with the most complex narrative compositions sometimes remained anchored to rocky walls or in locations where the boulders came to rest naturally, as is the case with Chalcatzingo Monument 1, perched high above the site proper on the skirt of Cerro Chalcatzingo, one of the two mountains that formed the dramatic setting for the settlement below.

As the Middle Formative transitioned into the Late Formative, a clear tension between three-dimensionality, two-dimensionality, and the undulating surface of the stone's surface persisted. Artists did not always seek to smooth the surfaces upon which they carved; in many cases, it appears that they wed their incisions to the natural valleys, planes, and protuberances of the stone's surface. La Venta Monument 13, which probably dates to the final years of La Venta's Middle Formative florescence (Drucker 1952), models this tension (Fig. 9.6). It depicts a striding male figure wearing a banded loincloth, woven headdress, tasseled sandals, and jeweled ornaments on his wrist, neck, and nose. The figure carries an object in his left hand – perhaps a weapon or a banner – and is flanked by four glyph-like elements. An isolated pictogram of a foot appears to his left, and a vertical sequence of three glyphs appears to his right, perhaps the oldest example of columnar inscription in Mesoamerica (Houston 2004; Strauss 2018b). Although the monument's precise date remains elusive, what is clear is the early and novel blending of image and text to produce a dynamic portrayal of action and movement complemented by the inclusion



9.6. La Venta Monument 13, oblique view, showing a striding individual. In front of him appears a stack of three glyph-like forms; a fourth appears to his rear. Photo by Linda Schele, courtesy of the Foundation for the Advancement of Mesoamerican Studies, Inc.

of glyphic forms (Strauss 2013). Interestingly, while the inscribed surface of La Venta Monument 13 is a carefully prepared plane, the uncarved bulk of the monument echoes its natural basalt form. Even at this early date, artists were experimenting with what it meant to manipulate a stone monument and make it a proper space for inscription *and* representation of an elite body.

These tendencies fueled development of the Late Formative stela tradition, which took increasing advantage of the smoothed surfaces of stones whose contours became more regularized and less revelatory of the original boulders from which they were carved (Clancy 1990). Yet a hint of the material's original nature often remained, even on monuments "made proper" for hieroglyphic inscriptions. For instance, the undulating back of La Mojarra Stela 1 is as natural as its almost glass-like front is prepared, and Tak'alik Ab'aj Stela 5 juxtaposes a flattened prepared front with a bulbous, boulder-esque back (see Figs. 9.1 and 9.2). Monuments without text, like Izapa Stela 4 (Fig. 9.3), also retain the irregular contours of the natural stone, yet foreground a smooth pictorial field that successfully showcased a "highly painterly, two-dimensional art style" that emphasized "historical and mythic scenography" (Coe 1966: 61; also see Norman 1976: 4). We suggest that something more than legibility alone was at play in these examples. Late Formative scribal artisans, and the rulers who commissioned these kingly monuments, were experimenting with intersections of medium, text, and image and the ways in which they could be inserted into the built environment. Quite often, Late Formative stelae were erected in accessible locations at the bases of mounds or in plazas, where they relied upon the engagement of the viewer to discern details that necessitated visual proximity. Their overall size, in comparison to antecedents like Middle Formative La Venta Stela 25/26 (Fig. 9.7; also see González Lauck 2010: fig. 6.4), is quite human: the figures carved upon them, although deprived of a naturalistic three-dimensionality, approximate the scale of the people who viewed them. Yet while some Late Formative inscribed monuments, including El Baúl Stela 1 (Fig. 9.8) and Izapa Stela 27 (Norman 1973: plates 45, 46), bore large bas-relief hieroglyphs that competed in size with the surrounding imagery, others demanded an intense level of scrutiny in order to discern their inscriptions (Strauss 2015b). Kaminaljuyu Sculpture 10 (Fig. 9.9), for example, bears a lightly incised hieroglyphic passage that quickly recedes in contrast to the richly carved scene around it, including, interestingly, a massive and stylistically distinct calendrical day sign (Strauss 2015b; also see Houston 2004: 300). In her discussion of Classic-period sculpture, Susan Gillespie (2008: 119) linked disparate viewing experiences to social rank, suggesting that the aristocracy may have had greater access to carved monuments than commoners. By extension, the small, faintly incised passages on Kaminaljuyu Sculpture 10 that demand proximity may have been intended, as well, for the eyes of a Late Formative literate and elite social class.



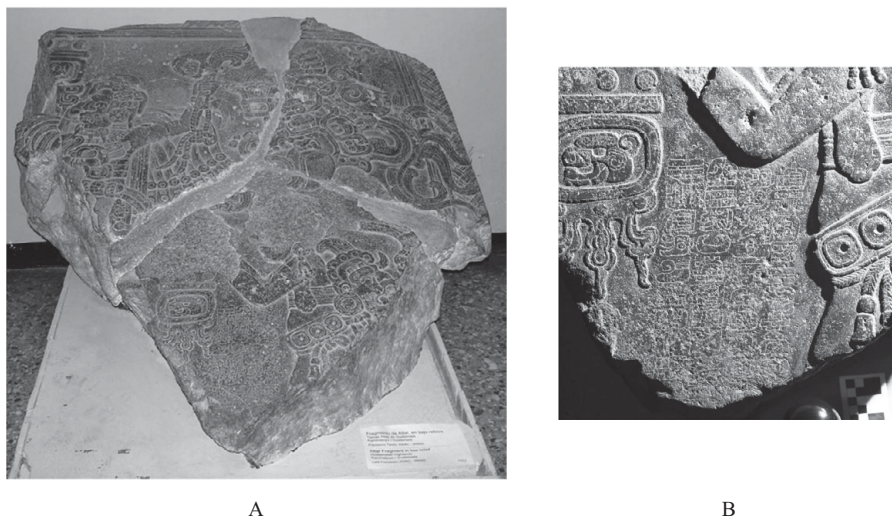
9.7. La Venta Stela 25/26, at right, in the La Venta site museum, with human figures for scale. Photo by Guernsey

It is likely that the early Mesoamerican scribes engaged with emergent script traditions took advantage of any number of ephemeral or fragile materials, such as paper, wood, stucco, ceramic, or small stone blocks, for inscription. Late Formative inscribed sculpture alludes to a grappling with the leap from smaller and more ephemeral surfaces to those of monumental carved stone (Strauss 2013). Rulers and artisans appear to have experimented with how these complementary signaling practices – established traditions of working in stone and more recent textual innovations – interfaced in the form of monumental sculptures (Strauss 2015b, 2018a, b). The framing bands on Late Formative stelae are one such innovation. Derived from precedents in earlier periods (Clancy 1990; Earley and Guernsey 2014; Quirarte 1977; Tate 2012), they increasingly functioned to organize conceptual fields and order information, as in the case of the terrestrial and celestial bands that frame the figures on Izapa Stela 4 (Fig. 9.3), or the basal bands beneath the protagonists on Kaminaljuyu Sculpture 11 (Fig. 9.4) and El Baúl Stela 1 (Fig. 9.8). According to Stephanie Strauss (2015b, 2018a, b), this increased focus on the clarity of visual fields and their horizontal organization during the Late Formative period appears to be, if not directly related, then at least conceptually tied, to the florescence of hieroglyphic writing, which was also beginning to grace the surfaces of stone monuments with greater frequency. We argue that, as Late Formative rulers



9.8. El Baúl Stela 1, with a columnar inscription to the left of the standing individual. Photo by Michael Love

experimented with the visual signifiers of an urban identity, they re-inscribed a conception of urbanity that was intimately tied to notions of literacy. Reading and writing were urbane acts that required properly prepared surfaces and demanded new interactions between the raw material substrate of a monument and its carved image program. Whether these inscriptions were functionally legible to potential audiences, then, was far less important than the fact that viewers knew the monument bore both image *and* text – a testament to the sophistication and metropolitan ethos of the commissioning ruler first and foremost but also, by extension, to that of the viewers who recognized these innovations. Indeed, as Strauss (2013) argued, our modern inability to parse these early scripts may put modern scholars on a similar footing to many of the Late Formative viewers of these very monuments. Literacy was likely reserved for a small portion of the populace, but the visual signifiers of a carved glyphic



9.9. Kaminaljuyu Sculpture 10: (a) Photo of monument; (b) Close-up of polynomial texture map imaging showing a detail of the faintly inscribed area of text to the left of the lower figure, beneath the individual's elbow. To the left of the faintly inscribed text is a large calendrical day sign. Photo and polynomial texture map imaging courtesy of Lori Collins and Travis Doering

passage — whether urbanity, eliteness, or wisdom — were equally salient features.

To reiterate, although many of the formal devices that are the hallmark of Late Formative stelae trace their origins to earlier periods, we see a remarkable coalescence of key traits that can be linked to the formulation of innovative cities and the invention of a new Late Formative urbanity. We also assert that art provided a powerful vehicle through which these ideas were both communicated and delimited at the hands of the ruling elite. The prepared surfaces of stelae revealed novel images, in some cases paired with hieroglyphic texts, giving form to a revolutionary mode of depiction that was markedly different from the art of the past, but that also departed significantly from many of the other sculptural forms that occupied these Late Formative site centers and those of lesser rank. In other words, the urbane novelty of stelae carved with kingly images and text at paramount sites was heightened, in many cases, by the juxtaposition of such monuments to more three-dimensionally conceived sculptures, such as toad-shaped altars or the so-called potbelly monuments of corpulent individuals, found at Late Formative urban centers of all ranks (Guernsey 2012).

Urbanism and the Kingly Body

This tension in Late Formative urban centers between narrative surfaces and more three-dimensional forms invites further examination. As we have already

indicated, only first tier sites along the Pacific slope appear to have had the privilege of erecting narrative monuments featuring the actions of rulers (Guernsey 2010b, 2020; Love 2010). The narrative stelae, with their emphasis on two-dimensionally rendered scenes of kings and gods engaged in mythic rituals, must have been rather extraordinary: they were the *avant-garde* art of their day, encountered in only the most politically powerful and artistically experimental sites. Tak'alik Ab'aj Stela 5 (Fig. 9.1), Izapa Stela 4 (Fig. 9.3), Kaminaljuyu Sculpture 11 (Fig. 9.4), and El Baúl Stela 1 (Fig. 9.8) demonstrate that rulers took full advantage of new narrative formats, commissioning compositions in which the kingly body was featured in motion and engaged in ritual. This tendency is more significant than scholars have previously recognized and one, we argue, that can be more fully appreciated by comparison to the dynamics of art and urbanism in other parts of the world.

Working with Late Babylonian and Early Persian art, Erica Ehrenberg (2008) asserted that an emphasis on two-dimensionality was a very deliberate tool. She argued that sculptors, masterful in a range of carving techniques that included both modeled and linear compositions, nevertheless chose to employ a two-dimensional style in Achaemenid palace narrative reliefs that

divorce the scenes from the reality of the three-dimensional world. Perhaps this approach was construed as an appropriate visual companion for the textual annals that lie behind the reliefs and recount that the king acts at the behest of the gods. What the king performs is thus visually as well as symbolically removed from the mundane world. The body itself is more akin to a flat-form mannequin on which is draped the royal robe and regalia. (Ehrenberg 2008: 105)

This possibility is intriguing to consider vis-à-vis the corpus of Late Formative art from the south coast and Guatemalan Highlands. It also relates to an equally provocative question: do the protagonists on monuments such as Izapa Stela 4 (Fig. 9.3) and Kaminaljuyu Sculpture 11 (Fig. 9.4), dripping with splendid regalia, represent historically specific kings or more generic representations of rulers? Later Classic period monuments from the Maya Lowlands carry with them the specificity of text; the rulers whose images grace the monuments are dutifully named in hieroglyphic inscriptions that often contain additional biographical information. Their carved bodies are often labeled as the *ubaah* of the king – a stative possessed noun phrase meaning “[it is] his or her image” (Houston and Stuart 1998; Houston et al. 2006). This Classic period textual formulation gels nicely with Ehrenberg’s analysis, since interpretive glosses of the *ubaah* glyph indicate that these figural representations were at once a physical extension of the ruler’s self and an image completely apart – a two-dimensional flattening of the precious “material” of the kingly body to match the prepared surface of the monument and its companion

hieroglyphic passages (Strauss 2013, 2015b). Unfortunately, this type of hieroglyphic specificity is lacking in the Late Formative sculptural corpus. It may be that, in the case of Late Formative sculpture, we are witnessing the portrayal of the office of rulership, or more generalized representations of prototypical rulers engaged in ritual action, rather than historically specific individuals. Yet we cannot rule out the possibility that some of the Late Formative imagery of urbane bodies does, indeed, contain idiosyncratic information or nominal devices (for discussion see Guernsey 2020; Mora-Marín 2018; Strauss 2018a, b; Stuart 2012).

Regardless of whether the individuals on Izapa Stela 4 or Kaminaljuyu Sculpture 11 represent historic individuals or prototypical rulers, it is apparent that the recurring costumes, postures, regalia, and narrative components of art throughout southeastern Mesoamerica forged a Late Formative vocabulary of kingship that emphasized the ruling body and the attributes and ritual actions deemed appropriate for kings. This is made clear in a comparison of Izapa Stela 4 (Fig. 9.3) to Kaminaljuyu Sculpture 11 (Fig. 9.4). The protagonist of each scene is anchored to a curling terrestrial band and engaged in dynamic movement, with one foot in front of the other and arms extended, wielding ritual implements. The censers to either side of the ruler's feet on Kaminaljuyu Sculpture 11, from which curling volutes of smoke ascend, reveal that we are witnessing a performance, one that captures a moment in time but that also, through its recording in stone, rendered it timeless. Both rulers are garbed in extraordinary costumes, replete with towering avian headdresses with impressive, hooked beaks. In the upper register of both monuments a second avian figure descends, whose presence invokes broadly shared narratives concerning the Principal Bird Deity, the supernatural bird closely linked to narratives of political authority and supernatural communication from the Late Formative period through the time of the Spanish conquest.

We do not have space, in this chapter, to delve into discussion of this supernatural bird's symbolic role in Mesoamerican mythology or its obvious utility to political rhetoric, which is underscored by its appearance in artistic programs and recorded mythologies that date from the Late Formative period through the sixteenth century. Rather, we move forward with the recognition that these avian performances by rulers were cosmologically charged: they referenced enduring mythological passages, but also framed the ruler as the individual responsible for performing, manifesting, and embodying these ideals. At Izapa, the monuments were part of larger mytho-political narratives orchestrated throughout the built environment (Guernsey 2006; Lowe et al. 1982; Norman 1976). This intervisuality² was central to urban programming at

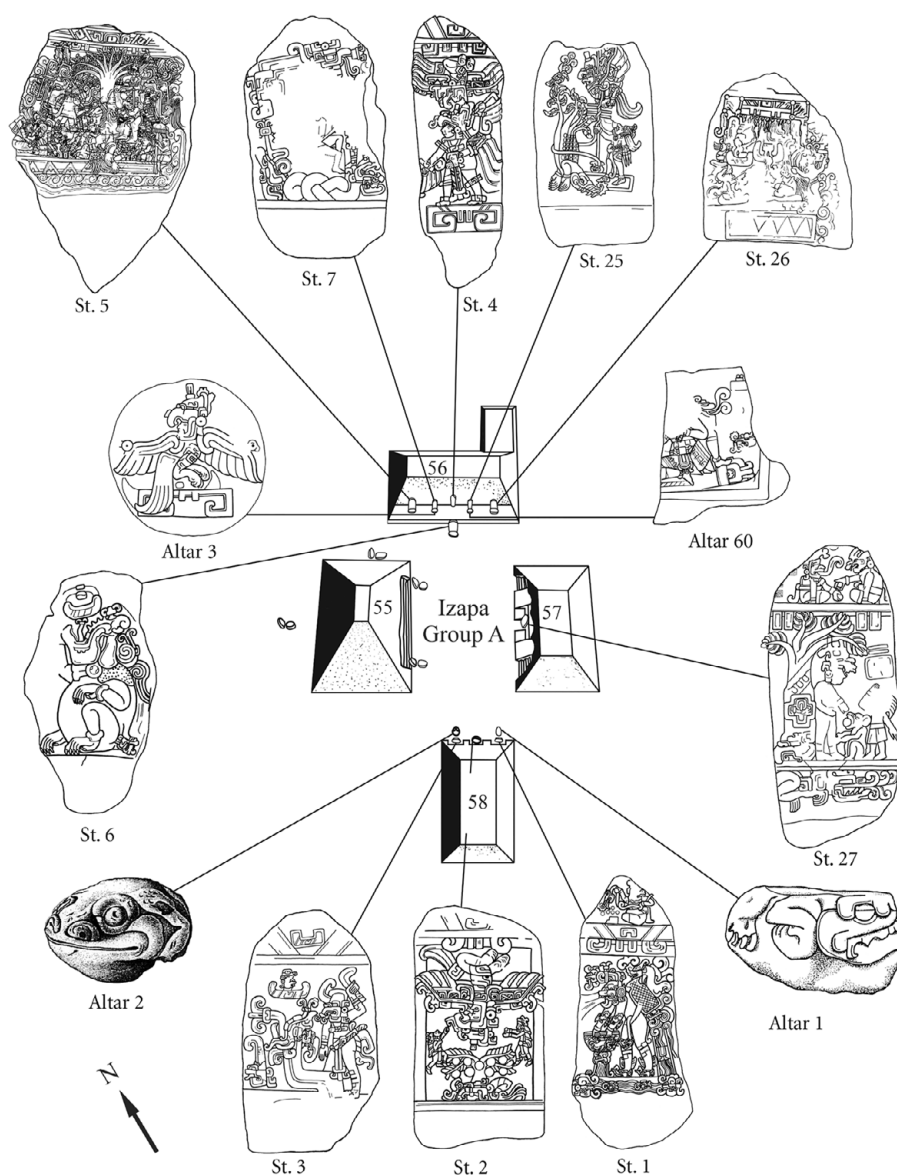
² The term "intervisuality" implies that all images have larger operational contexts, which involve any number of visual interactions throughout space and between objects. The term

Izapa. In the Group A plaza (Fig. 9.10; also see Love and Rosenswig, Chapter 7, Fig. 7.4, for a map of the site of Izapa), the avian performance of the ruler on Stela 4 is echoed in the imagery of Stela 25, which portrays a passage from the mythic saga of the supernatural bird (Norman 1973: plates 41, 42). This was a recurring theme at Izapa, and appears on Stela 2 and Altar 3 as well. Of the ten carved stelae in this plaza, three invoke avian performances. One focuses on the portrayal of a historical or prototypical ruler, while the other two contextualize his performance in ancient and widely shared mythologies. We lack comparable archaeological context for Kaminaljuyu Sculpture 11 (Parsons 1986: 65–67), but the site of Izapa makes clear that the ritual performances of kings were not isolated, decontextualized acts, but instead predicated upon mythic stories, which were featured on other monuments throughout the urban center. Just as significantly, the ruler's body was central to the visualization of these allegorical sagas (Guernsey 2020).

The existence of shared narratives concerning avian performances at Late Formative cities scattered across a wide swath of Mesoamerica implies that the story was useful to kings. Perhaps it was politically expedient to invoke this theme and, in so doing, signal membership in an elite communication sphere that emphasized the duality of a ruler's temporal and mytho-religious identity (after Kantorowicz 1997). As Guernsey (2021) has argued elsewhere, the story of the Principal Bird Deity during the Late Formative period was linked to messages of proper social order on a grand scale. Scenes featuring the bird reference calendrical time, spatial organization, and mythically charged rituals of renewal and sacrifice – all things that were necessary for establishing and maintaining social order. The ruler, in regalia that linked him to this supernatural avian, thereby embodied mythic ideals of social order. Moreover, these themes of social order were highlighted by utilizing art forms that fully embraced new two-dimensional and highly narrative frameworks for presentation. The format was innovative, and the messages were, too. In each city, these innovative sculptures were enriched by the intervisual relationships between monuments, which activated the memories of viewers, inviting them to participate in the assemblage of the stories (although some viewers were likely more successful than others in accomplishing this). The kingly body was a central component of these narratives, both in the built environment and, likely, in the minds of many of those experiencing the sculptures (Guernsey 2020).

Yet these very conclusions force us to revisit the question of whether Late Formative monuments like Izapa Stela 4 or Kaminaljuyu Sculpture 11 portray historical individuals, or instead invoke prototypical kings that signified, more

also recognizes the role of the viewer in connecting/recreating story lines that weave between monuments; rather than meaning residing only in the image itself, it is activated through this larger process of visual engagement.



9.10. Schematic rendering of Izapa Group A plaza, showing location of carved stelae (St.) and altars. After Lowe et al. (1982: fig. 8.1)

generally, the office of rulership. Such a query calls to mind Irene Winter's (2010: 91) observation regarding Neo-Assyrian imagery: she noted that idiosyncrasies and detailed physical likeness may not have been perceived as essential or even desirable. Instead, emphasis was placed on elements that communicated ideal values or attributes perceived as appropriate for rulership. Neo-Assyrian kingly images, then, did not represent "a portrait of *the* king" but rather "the portrait of *a* king." Even if we acknowledge the presence of

nascent nominal devices in Late Formative sculptures, which clearly anticipate those developed more fully during the Classic period, we must concede that the overarching messages of Late Formative monuments rely less on the presentation of recognizable, historical individuals than on the ideals associated with the office of rulership.

SCULPTURE, ORDER, AND ELITE SOCIAL REPRODUCTION

Framed in this manner, the question of whether these Late Formative images portray specific individuals or paradigmatic rulers becomes less critical to establish definitively. Michael Coe (1989) first recognized that certain narratives, like those featuring rulers costumed as the Principal Bird Deity, served as paradigms for proper, elite behavior. The imagery did more than portray mythological narratives: it established a discourse for divinely sanctioned rulership and provided a blueprint for ritual action. These monuments, in effect, visualized social order and the proper comportment of kings, and became an integral component of Late Formative elite or “high” culture and urban existence at many of the most powerful cities. Rhetoric such as this must have proven useful to rulers, who, in the words of Jonathan Hill (1988: 6), thereby communicated their “controlled access to the hierarchical structuring of the mythic power of liminal, neither-here-nor-there beings.” Late Formative imagery featuring the mythic acts of kings became an effective “program for orienting social, political, ritual, and other forms of historical action” (Turner 1988: 236; also see Gillespie 2007, 2008: 104).

Even recurring Late Formative narratives such as these were never, however, static. Imagery concerned with the Principal Bird Deity and statements of political authority, for example, were woven into the urban fabric at sites as far flung as Izapa, Kaminaljuyu, Tak'alik Ab'aj, San Bartolo in the Petén, and La Mojarra in Veracruz. But each site's artistic program reveals variations or subtle points of departure that speak to both the malleable nature of myth and history and the ways in which rulers tailored themes to suit their individual situations. Terence Turner (1988: 275) noted that often the supplest narrative structures are the most successful, as they are amenable to formulation in an endless variety of ways. So, too, the ways in which these ideas played out within the matrix of urbanism attest to their flexibility in the hands of Late Formative rulers and artists who molded them to fit their own unique historical circumstances.

What these shared stories and their presentations in multiple urban settings also reveal is that they mattered. This imagery was about elite social reproduction and, especially, a ruler's role in it, and it played a key role in the fabric of Late Formative urbanism. Expression of a kingly identity, conveyed through vivid imagery in which rulers performed the acts of gods or re-enacted mythic passages, seems to have become increasingly vital during the Late Formative

period along the south coast, when many of the first state-level societies were forged and political authority was becoming increasingly centralized in the hands of a privileged few (Love and Rosenswig, [Chapter 7](#)). Hieroglyphic writing, including calendrical dates, sometimes captioned or elaborated these scenes, placing kingly actions in historically specific contexts. Perhaps even more significantly, these novel artistic and textual devices fundamentally altered the relationship between two- and three-dimensional forms, prepared and natural surfaces, and became central to articulating notions of kingly identity as urbane and generative, a physical manifestation of intellectualism (Strauss [2013](#)). Participation in this political rhetoric with neighbors, near and distant, friend or foe, may have been crucial to survival in a social, political, and even economic sense (Guernsey [2012](#), [2018](#)). It was also, obviously, important to invoke such statements in monumental form and anchor them to the physical structures and paths of the urban environment. One would not have been able to move through a city such as Izapa, for instance, without experiencing the visual impact of these scenes and disciplining one's bodily movements to their placements and forms (*sensu* Love [1999a](#)). That many of the themes we see in Late Formative centers can be traced forward in time, albeit with variations, through the Classic period, with some even reappearing again in sixteenth century texts, also indicates that these Late Formative innovations had staying power. They laid the foundation for a key mode of historical production in which ancient templates for civilized behavior and elite legitimation in Mesoamerica were tailored to the urban environment (Guernsey [2020](#)).

Hieroglyphic inscriptions were another tool by which Late Formative rulers asserted privilege and status. The texts quite literally began to frame kingly bodies and signify a domain of specialized knowledge. On these monuments, inscriptions worked in tandem with the kingly body, reinforcing a rhetoric in which the ruler shouldered the burden of power and became the physical manifestation of a social order that encompassed calendrical cycles, history, and specialized knowledge. As all of the other chapters in this volume address, these ideas, in which rulers controlled the technologies of history and time, were paralleled architecturally. The monuments worked in tandem with the built environment – from E Groups to triadic groups, astronomically aligned structures, and urban grids – to articulate technologies of time, astronomy, design, and the intellectualism of urbanity orchestrated under the auspices of Late Formative rulers (see Canuto and Estrada-Belli, [Chapter 4](#); Stanton and Collins, [Chapter 5](#); Love and Rosenswig, [Chapter 7](#); Sugiyama, [Chapter 8](#)).

CONCLUDING THOUGHTS

Late Formative visual modes and sculptural programs along the Pacific slope engaged with a variety of significant concepts and innovations: (1) the bodies

of kings writ large and in increasingly two-dimensional formats that better accommodated narrativity and expression of elite, high culture; (2) the marriage of texts to monumental stone surfaces and a growing emphasis on expression of the technologies of time and other specialized knowledge; and (3) an exploitation of the inherent tension between a stone's rocky matrix and its surfaces, manipulated to accommodate inscription and complex scenes. Several of the most notable artistic innovations were visible exclusively in first-tier urban centers, where programs of monumental sculpture set them apart from most of their neighbors. Urbanism and city life in primary centers looked different than at subsidiary sites, in other words, and both internal and external hierarchies were communicated visually. At sites such as Tak'alik Ab'aj, El Baúl, and Kaminaljuyu, where kingly bodies began to be placed in dialogue with hieroglyphic texts, we see a Late Formative evolution of visual urban identity that foregrounded ideas of learnedness, sophistication, and wisdom. In many ways, the Late Formative period ushered in a new, and increasingly circumscribed, program of intellectualism and urbanity in Mesoamerica. Late Formative kings and artists produced new modes of representation while drawing heavily on the traditions of the past. They also set the stage for centuries of artistic production to follow. The monumental art of the Late Formative period played a significant role in the larger cadence of urbanism, and generated a new way of visualizing elite identity.

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CHAPTER TEN

LANDSCAPE AND LEADERSHIP IN MESOAMERICAN CITIES

A Comparative View

Monica L. Smith

THE STUDY OF THE MESOAMERICAN URBAN REALM IS energized by two significant recent developments. One of these developments is the technical achievement of full-coverage survey through the use of Light Detection and Ranging (lidar) methods. Lidar enables archaeologists to elicit the plans of entire cities and their surrounding regions even in densely vegetated environments that had previously yielded archaeological remains only through challenging and time-consuming processes of excavation and transect survey. The other significant development is a theoretical one, in which a critical mass of excavation data on the chronologies of sites and their associated structures now enables us to address changes over time within long-lived urban settlements. By looking at diachronic shifts in architecture and material objects, researchers have facilitated an appreciation of the subtleties of developmental sequences of urban characteristics such as ritual monumentality and civic leadership.

An integration of extensive landscape perspectives and intensive social evolution trajectories provides not only an enhanced understanding of the complexities of early cities, but also can help us to make sense of (and ask better questions about) ancient cities elsewhere. Globally, many distinct physical and social configurations appeared for the first time only in cities, including writing, record-keeping, and the configuration of living spaces to include a channeled integration of passageways, households, plazas, and monumental architecture. Urban centers provided elites with a permanent venue of aggrandizement, and ordinary inhabitants with an opportunity to diversify

their resource base and to access goods that facilitated displays of social distinction. Mesoamerica offers rich datasets on these transitions, illustrating how the compulsion to create and sustain urban life can surmount the significant challenges presented by natural environments.

LANDSCAPE

Although most people associate archaeology with excavations, surveys have been the historical mainstay of research on Mesoamerican cities. Lowland Mesoamerican urban settlements are located in areas that have been overgrown with dense vegetation (a factor that also brings to mind the challenges that the ancestral peoples themselves must have faced in the taming and maintenance of their explosively organic environment). In much of lowland Mesoamerica, it was nearly impossible to implement the types of pedestrian transect surveys that had, by the 1970s, become an essential form of research in Mesopotamia, the Greco-Roman world, the Andes, and the Valley of Mexico. No one could blame archaeologists for initially focusing their attentions on the most prominent structures, given that they were the only visible remains amongst jungle foliage that engulfed even the tallest pyramids.

Over the past century, Mesoamerican researchers adopted creative solutions in their quest to understand the landscapes of settlement around urban monuments. They used lines of sight along rivers or across topographies to understand relations among and within population centers and the viewsheds experienced by ancient people (cf. Houston et al. 2003). Researchers cut transects through the jungle, moving out from the core of ancient cities along a machete-slashed line of exploration to collect data about site density and landscape variability (e.g. Healy et al. 2007). In some cases, they painstakingly invested years of work at a single site in ways that enabled the assessment of holistic urban configurations through the cumulative excavations and explorations of many different team members (e.g., D. Chase and A. Chase 2017 for Caracol; Joyce, Chapter 2, for Oaxaca; Lentz et al. 2015 for Tikal; Pool and Loughlin 2016 for Tres Zapotes). And in other cases, they used the excavations of single architectural types within settlements and their chronologies as proxy evidence for the creation of landscape-scale social integrations (e.g. Doyle [2012] on E Groups).

It was the advent of lidar, however, that finally provided researchers with the capacity to address whole landscapes of ancient human activity in the Maya region with a synchronous evenness of coverage (e.g. Canuto et al. 2018; A. Chase et al. 2011; Inomata et al. 2018; Ramírez-Núñez et al. 2019). In the present volume, authors offer a rich reading of the landscape through the intervention of lidar that increasingly has been applied to many iconic urban settlements, as discussed by Robert Rosenswig (at Izapa, see Love and

Rosenswig, [Chapter 7](#)), Travis Stanton and Ryan Collins (at Yaxuná, see [Chapter 5](#)), and Marcello Canuto and Francisco Estrada-Belli (at Cival, see [Chapter 4](#)). Important caveats still remain, of course; as Arlen Chase et al. (2011) noted in their pioneering work at Caracol, ground-truthing for interpretive consistency is just as important with lidar as with any other form of remote sensing. This caveat is reinforced in this volume by Stanton and Collins ([Chapter 5](#)), who caution that merely reading the landscape from space can be misleading because anomalies are not always indicative of human activity.

The judicious use of lidar has had a transformative effect on the discussion of the ways in which population centers occupied their landscapes, and on the analysis of the relationship of cities to their hinterlands. As Norman Yoffee (1995: 284) and George Cowgill (2004: 527) have observed, the creation of the “urban” denotes the simultaneous identification of that which is “rural,” such that the development of urbanism creates a dichotomy of settlement out of what was once an undifferentiated landscape of hamlets. In Mesoamerica, however, there is a clear diversity of site types in the landscape long before the advent of urbanism, resulting in a productive discussion about the different scales and types of interactions amongst sites (as seen in the chapters by Arthur Joyce [[Chapter 2](#)], Stanton and Collins [[Chapter 5](#)], and Canuto and Estrada-Belli [[Chapter 4](#)]). Moreover, relationships among sites were multidimensional and multiscalar, such that interactions might not have been exclusively between centers and their proximate settlements as might be implied by the imposition of Thiessen polygons or other mathematically derived bounding boxes of territorial containment. Rather, the presence of so many urban settlements across the landscape from the coasts to the highlands suggests that there could also be relationships among distant settlements that constituted stronger bonds than the link between any city and its immediate rural hinterlands. In other words, an urbanizing landscape has a variety of lateral effects in addition to strictly hierarchical ones, which might be better captured by words like “consortium” rather than “hierarchy” or even “heterarchy.”

A consortium can be defined as a configuration that conserves the status quo or that cautiously engages with change in an institutional fashion through the participation of many individuals or subgroups. The concept of a consortium, which encodes actual and *latent* potential for activity, is a useful augmentation of the more-active framing of ancient interactions through the parlance of cooperation and collective action (see, e.g., Carballo 2013; Carballo et al. 2014). Consortia are notoriously slow in their deliberations because they represent a number of people and groups, in which the achievement of consensus is a time-consuming process (cf. Colombijn 1994: 18). Yet consortia also encode an underlying symbiosis and cooperative structure in a configuration that embodies and facilitates “power to” rather than “power over” (Essig 2000: 16; see also Coleman 2014). The consortium approach enables us to

evaluate circumstances in which cooperation and collective action are mulled by large groups of participating individuals and in which eventual actions (or inactions) are the result of widespread, incremental, and agentic actions and acquiescence.

A consortium approach, marked by opportunistic interactions across variable lengths of space, describes the many small-scale and relatively inconsequential transactions that took place in both urban settlements and rural ones in a broader urbanizing Mesoamerican landscape. The basis of interaction was through the existence of a shared worldview, resulting in what Stephen Houston and colleagues (2003: 212) have referred to as a “moral community.” The moral community was characterized not by a specific form of leadership, but by a collective understanding of appropriate behavior and interactions. Houston and colleagues also use the emotionally charged word “covenant” to describe the way in which a community held itself together through expectations as well as expenditures. The sense of latency again plays into the concept of the consortium as a force that existed not only to *do* something, but to *be* something, from which specific tasks were identified and carried out through collective discussions and physical transactions.

At the landscape scale, there were a number of activities that predated the development of urbanism that served as a physical expression of the moral community, such as feasting, the construction of ballcourts starting ca. 1600 BC (Taladoire 2001), and the development of civic–ceremonial architectural clusters known as E Groups starting as early as 1000 BCE (Inomata et al. 2018; see also Doyle 2012). During and after the advent of urbanism, labor investments were made in new architectural and engineering efforts that continued to be widespread in their distribution, including the terraforming of agricultural regions, urban water provisioning (Arroyo, Chapter 6), and the construction of platforms and other monuments (as all of the authors in this volume address). As with ritual buildings, such undertakings were not one-time investments of energy but required continual maintenance and upgrades because of incremental natural assaults such as rainfall.

Within a landscape of shared social expectations, there could be differences in the way that sites interacted with larger centers and with each other, as noted by Stanton and Collins (Chapter 5) and by Michael Love and Rosenswig (Chapter 7). Some settlements might be focused on ritual; James Doyle (2012: 361), for example, notes that E Group architecture appears to have been developed in “very specific locations on the landscape . . . although small villages probably existed across the Lowland terrain,” and lidar surveys show that hinterland ritual centers were part of a process of urban growth (e.g. Inomata et al. 2018; also see Canuto and Estrada-Belli, Chapter 4). Some settlements might be focused on exchange, if they were located in areas of resource density or at the junctions of longer-distance routes (e.g., Golden 2003).

An interpretation of differential function is especially applicable to cases where sites appear to be different from one another in some obvious architectural way (like the smaller settlements investigated by Joyce in [Chapter 2](#)). But even “lookalike” sites could be encoded with a great deal of dynamism and flexibility because they enabled networks to be opportunistically constructed and changed whenever trade and transport were interrupted, whether by warfare, swift-onset natural calamities such as fires and hurricanes, or enticements such as a fair, festival, or ball game held in a particular locale. Socially, a distribution of “lookalike” sites also would offer people the opportunity to relocate from one small site to another rather than automatically seeing the city as the optimal or only source of refuge at times of warfare or natural disaster. Strong hinterland relationships served urban residents well as a source of supply in times of plenty, and as a safe place for retreat when urban life was untenable.

The ancient Mesoamerican landscape certainly had a high level of mobility that was engendered in the widespread exchange of goods from different ecological zones (Masson and Peraza Lope 2004). Mobility also was displayed and materially encoded in Maya *sacbeob* (causeways) that ran across the landscape, with some of the most prominent ones being the hundred-kilometer *sacbe* linking Yaxuná and Cobá (Stanton and Friedel 2005: 238; Stanton and Collins, [Chapter 5](#), [Fig. 5.2](#)) and the lengthy *sacbeob* connecting numerous sites in the vicinity of Dzibilchaltun (Kurjack and Andrews 1976). The flexibility of urban–hinterland dynamics resulted in some relationships that were very close and intense, such as the ones documented by Traci Ardren (2017: 127) for thatch at Chunchucmil in Yucatan. She calculated that at any given time there were 32 million palm fronds in use in domestic architecture alone. But some relationships might have been very attenuated, with objects that are evidence of contact (such as the Teotihuacan-style objects that are found 1,000 km away at Kaminaljuyu discussed by Arroyo, [Chapter 6](#)), brought through entrepreneurial exchange, through elite-sponsored diplomatic exchange, or by a small number of migrants. Even the exchange of “useful” objects was opportunistic and variable, as Christopher Pool and Michael Loughlin ([Chapter 3](#)) note in their observation that obsidian from Guatemala appeared and disappeared from the trade patterns of the Gulf Coast.

The concept of “low-density urbanism” frequently has been applied to the Maya settlement configuration (e.g. Isendahl and Smith 2013; Scarborough et al. 2012; and Canuto and Estrada-Belli, [Chapter 4](#); all following Fletcher 2012). However, we might productively turn this concept around and speak instead of “high-density ruralism” in which networks of rural places were inhabited by people who had only occasional, situational interests in traveling to the urban center (as young military conscripts, perhaps, or as participants in cyclical religious rituals). Other simplistic paradigms are ready for re-examination in light of the comprehensive data offered by coordinated

programs of lidar investigation and ground-truthing. A recognition of interdigitated connectivities among sites of different sizes means that the concept of a “primate center” should be retired (although, as Saburo Sugiyama, [Chapter 8](#), makes clear, this appellation might still apply to Teotihuacan as a counterbalance to the intensely networked cities of the Maya region).

Addressing the Mesoamerican urban landscape as a series of interdigitated, differentiated sites in which size is not the only criterion of viability also provides an opportunity to critique the site-size hierarchy paradigm that has been used in other global regions as a measure of social complexity (M. L. Smith 2021). Archaeologists working elsewhere are increasingly recognizing that despite their monumentality and their function as the home of political elites, “centers” are not always so powerful. Benjamin Arbuckle (2012) has examined the settlement landscape of ancient Acemhöyük in central Anatolia and noted that, for Mesopotamia as a whole, there is a considerable amount of power and economic control coming from mobile agents. Dispersed landscapes of economic and ritual authority also are seen in South Asia, where Buddhist ritual establishments invested in their rural productive hinterlands in significant ways (e.g. Shaw 2007). Even locations that were seemingly dominated by a single large population center, such as Angkor, are put into perspective once the study region is enlarged to include distant economic and ritual centers (e.g. Hall et al. 2016).

A discussion of spatial interactions in other regions of the world immediately brings to mind the concept of the state, and the way in which a network of settlements is implicated in the political control over territory. In the Maya region, the densely occupied landscape of cities and other settlements constituted an interdependent network that engaged in a lattice of warfare, ritual competition, trade, and conquest, but did not crystallize into a single territorial hierarchy (Tikal being one of the few possible exceptions). Yet, in the chapters in this volume about the Maya region and elsewhere in Mesoamerica, there is clearly a desire to identify the political relationships that formed over the spaces of urban landscapes. The word “polity” is used in several chapters in this volume (most notably Pool and Loughlin, [Chapter 3](#)). While the term is certainly preferable to an inappropriate use of the word “state,” what exactly might the term mean? The word “polity” implies administration, enveloped within institutions such as taxation or labor tribute, as well as expectations of command, obedience, and punishment that would have required the emplacement of managers and overseers. Nor would political configurations have been stable over time; “polities” in the Formative period might have been quite different (and not necessarily weaker) than those evident in later periods. A critical evaluation of what “polity” means might also be a way of identifying what people are doing in urban centers: population centers are certainly places of “technologies of time management” (Canuto and Estrada-Belli, [Chapter 4](#))

and elite display or “tagging” (Guernsey and Strauss, [Chapter 9](#)). But were these expressions of despotic authority, or merely markers of competence? Were immigrants to Mesoamerican urban centers being coerced or captured (as perhaps suggested by the sacrificial burials of Teotihuacan, for example, described by Sugiyama in [Chapter 8](#)), or were early cities the realm of more entrepreneurial activities of coalescence?

In the lowland Maya region, landscapes populated by settlements of differential size, resources, and functions appear to have constituted both the economic and moral communities from which urbanism developed. Relationships between nascent urban centers and their surrounding settlements were mutualistic ones, created through an increasing concentration of multipurpose administration as well as the emergence of entrepreneurs. A view of urbanism as mutually created by hinterlands and centers lends an important insight into the limitations of the “consumer city” concept modeled by Max Weber and predicated on the assumption of an unequal, exploitative relationship between the city and its surrounding hinterlands (see Erdkamp 2001). If, as discussed below, leaders were latecomers to a configuration that already had strong urban–rural integration, then the idea of cities having a predatory relationship with their hinterlands also needs to be reframed as one in which there were mutual exploitations and dependencies.

Some credit for rural–urban synergies probably could be given to population growth, resulting in the densification of some settlements, a push into new regions, development of techniques of agricultural exploitation, and an increase in opportunities for contacts among groups. The process of population growth provided a mathematically larger number of connections among individuals, households, and groups. As Brian Spisak and colleagues (2015: 301) have noted: “A larger population, as a result of niche construction, creates increasingly complex networks, and subsequent social stratification imposes structural constraints (i.e., formalized hierarchy) . . . These leadership hubs have greater access and control over resources and, thus, become focal points of networks.” In Mesoamerica, the function of population centers as leadership hubs provided the opportunity for individuals to assume scaled-up managerial roles as seen in the archaeological record of many cities.

LEADERSHIP PARADIGMS

As articulated in this volume, a recognition of diverse, agentive social landscapes around urban centers enables an assessment of the generative effects of hinterlands. This dynamic regional perspective also prompts a critical evaluation of sociopolitical configurations within urban centers themselves. Archaeological remains from Mesoamerica show that by the Late Formative period, particular individuals had power and authority: murals and bas-reliefs

feature individuals wearing striking clothing and headgear; lavish burials were accorded to only a few individuals; and stelae portrayed scenes documenting rulers' military prowess and ritual authority, at times accompanied by hieroglyphic inscriptions. Evocative texts and images were displayed in public places, such as plazas, in ways that visibly reinforced the legitimacy of rulership in the social realm, and were sometimes inscribed within the dark and enclosed confines of religious structures to reinforce the legitimacy of rulership in the ritual realm. Although elites are clearly present at the uppermost levels of ancient urban sites, research on the development and trajectory of authority in Mesoamerican cities suggests that leadership growth over time was complex and non-linear, and that mere hierarchy is unlikely to have been the only explanatory rubric for social and political integration in urban centers.

One of the most revelatory observations brought forth by this volume is that the appearance of clear signs of leadership in many cities postdated other significant expressions of urbanism such as ritual architecture. Many chapters in this volume (including those by Julia Guernsey and Stephanie Strauss, Joyce, Love, Love and Rosenswig, Stanton and Collins, and Sugiyama) engaged with the concept of high culture as a component of urbanism. Monumental architecture on both horizontal and vertical planes (tall pyramids and steep-sided ballcourts, deep reservoirs, broad plazas and elevated *sacbeob*), would have been a galvanizing point of reference that made urban places distinct from the countryside. Yet these areas of monumental architecture were not a one-time statement: they continued to be places of investment and change as we see through the meticulous work at Teotihuacan by Sugiyama and others (Cowgill 2015). Prior to the emergence of the singular leadership that we associate with Classic period stelae and the elaborate political genealogies inscribed thereon, there were many expressions of non-domestic architecture. In the earliest incarnations of urbanism, who was doing the work of constructing, maintaining, and augmenting monumental structures? Equally importantly, who was taking the credit?

Mesoamericanists' careful attention to structural chronology reveals two things: first, that ritual architecture was an essential initial component of urban life; and second, that rebuilding is a constant theme (e.g. Doyle 2012; Pool and Laughlin, Chapter 3; Stanton and Collins, Chapter 5; Sugiyama, Chapter 8). Some architectural elements such as pyramids and platforms were scalable, meaning that they could be constructed in larger or smaller form depending on the number of people and materials available for their construction and the number of people who might have expected to be served by the emplacements. Some constructions were highly visible and located in cities' central zones, while miniaturized versions of sacred architecture in neighborhoods were known only to the occupants, as seen, for example, in the shrines occupying courtyards in the various residential compounds of Teotihuacan

(Manzanilla 1996). The constant process of modification illustrates that the built environment was never static but encompassed ongoing discussions among ancient residents that continually anticipated future modifications (cf. M. L. Smith 2016).

In the Maya realm, Houston et al. (2003: 220) have suggested that when discussing extra-large architecture it is helpful to make a distinction between “public” and “monumental,” in which the former appellation can make sense of larger-than-household sized constructions that nonetheless have relatively small amounts of labor evidenced in their construction. These types of structures indicate neighborhood-level social interactions that would have resulted in the dotting of the landscape with installations designed, built, and used by local residents. The subsequent growth of any one such settlement into urban size was merely a vertically and horizontally hypertrophic version of a familiar community pattern, which extended the “shared social map of the landscape” (Doyle 2012: 355) that people had already created in the surrounding countryside. A consortium approach to the landscape accompanied those who moved toward urban centers, such that covenants of belief and practice were augmented by the relatively greater concentration of people in an urban environment but did not fundamentally result in an ethos different from what was sustained in the countryside.

The conflict theorist Peter T. Coleman offers an observation about power dynamics that provides a helpful insight on the different timescales of social expressions of authority, and which may serve as a particularly apt description of the Mesoamerican urbanization process as one that occurred as an outgrowth of a moral community. Coleman proposes that power expressions come in two forms: primary power and secondary power. Primary power “refers to the ability to shape the normative domain or affect the sociohistorical process of reality construction” through a shared assessment of reality, truth, and fairness (Coleman 2014: 140). Wielded on a widespread level, primary power is what underwrites the credibility of individualized expressions of authority (what he terms secondary power). Viewing social interactions and physical investments from the consortium perspective suggested for the landscape level of interactions in ancient Mesoamerica, it was primary power that set the stage for the eventual development of leadership expressions of authority (such as elaborate burials and historical narratives) subsequently found in urban centers.

Takeshi Inomata, in an assessment of the meanings of power and authority in the Maya region, has suggested that instead of asking a simple question about when leadership emerged, “We probably should ask what *kind* of authority, with its layers and inconsistencies, was constituted in specific historical contexts” (2016: 43, emphasis added). Different forms of authority and legitimacy emanated from the “moral community,” but the community was

not a passive one that simply waited for leaders to establish themselves; Inomata (2016: 52) emphasizes that leaders were vulnerable, and that new architectural elements were the result of consensus and agreement rather than coercion or imposition (see also Houston et al. 2003). In Mesoamerica as a whole, the timing of the emergence of leadership relative to the chronology of monumental construction provides a critical lesson on the relationship between the presence of power-wielding elites, the development of civic institutions, and the alternate organizational voices that would have been present in the vast, sprawling configurations of cities and their hinterlands.

The moral role of the hinterlands is seen not only in the configurations of rural settlements, but also in places other than population centers, as Pool and Loughlin (Chapter 3) discuss for the role of sculpture at Tres Zapotes, as Stanton and Collins (Chapter 5) discuss with reference to the *sacheob*, and as Bárbara Arroyo (Chapter 6) suggests for the water landscape of Kaminaljuyu. These investigations illustrate that ancient Mesoamerican spatial investments encompassed actions at every possible scale, from individuals scratching out a graffito to the anonymous workaday labor inputs of making the terrestrial and aquatic infrastructure that served to physically integrate outlying settlements with urban centers. In fact, the communal and physical configurations of the hinterlands, far from being eclipsed once cities were established, were likely to have been the source of continuing legitimacy for urban leaders even if they rarely stepped foot into the countryside once ascending to high office.

Given the investments evident in the landscape of diverse and intensely occupied settlements, populations may have been slow to filter into urban centers (another factor that may have resulted in the long and tentative upward trajectory of overt expressions of political authority). Even the most rapid expansions would have taken at least three to four generations, it seems, meaning that instead of a rapid “Big Bang” (*sensu* Pauketat 1997) perhaps there was more of a “slow bang,” which makes it even more interesting from the perspective of the ordinary people living in and around urban centers. A Big Bang is a point-specific phenomenon that could be initiated by a singular event (a disease, a drought, a war, a charismatic religious event) but was promulgated only with great costs. By contrast, a slow bang, brought into existence over a time span of 50–100 years or more, is indicative of deeply held convictions about the “right” way to live, worship, and engage in transactions in ways that would have sustained cities prior to and in conjunction with the emergence of elite leadership.

In Mesoamerica, religion and other forms of sustaining ideologies were steady components of social organization, which would explain what seems to be the very long stability of certain deities, ritual valuables such as jade, and social practices of focused activity such as the Mesoamerican ballgame. This continuity is remarkable, given that so many other elements in Mesoamerica

(political configurations, languages, environments) seem to have been extremely diverse, variable, and subject to change. Contrary to the longevity of social and ritual traditions and the development of urban centers as religious and communal places, leaders' effects might be viewed as both later in conceptualization and more likely to fail in making much of an impact (with some attempts falling visibly flat, as Joyce [Chapter 2] suggests for Río Viejo). The dynamic fragility of leadership may be why would-be leaders had to develop and promote new technologies (writing and iconography, as discussed by Guernsey and Strauss, Chapter 9) or new expressions of religious fervor such as spectacular burials with evidence of force (as addressed by Sugiyama, Chapter 8, for Teotihuacan).

A gentle critique of the concept of "polity" arises once again, as the simple appellation of polity likely obscures the many reasons that people came into the city and contributed the labor required for urban constructions and the management of supplies of food and raw materials. Ordinary households, clustered into physical zones of convenient access (what we might call "neighborhoods" even if households and their accompanying gardens were physically spaced relatively far apart), were essential to every urban activity that was materialized through ritual architecture, terraforming, and feasting. Time-based considerations were part of their patterns of movement, given that some migration was temporary (e.g. Río Viejo, as described by Joyce, Chapter 2) and some migration was undertaken on a long-term basis (as at Teotihuacan in Sugiyama's contribution). Political and religious leaders, who were busy organizing high-visibility construction projects, probably left those ordinary households to be provisioned by entrepreneurs who supplied the daily-use goods, including food, beverages, salt, cloth, building materials, personal ornaments, tools, raw materials, and ceramics, whose source areas were dispersed in the natural landscape.

The delayed onset of hierarchical leadership in the Maya region compels archaeologists working elsewhere to step back and ask much broader questions about the kinds of leadership that are necessary or optimal in high-density settlements such as cities, and how the function of leadership changed over time to include the forms of political, aggrandizing control that became evident only later. Anthropological assessments of ancient cities increasingly suggest that the envisioning of a simple apex hierarchy captures little of the dynamic realm of urban configurations (e.g. Sinopoli et al. 2015; M. L. Smith 2018). Leadership also is a concept that can be augmented and strengthened over time, as seen through the careful evaluation of architectural construction stages. In Mesopotamia, for example, Jason Ur (2012: 541) notes that the development of what he calls "unambiguous palaces" only start in the mid to late third millennium, about a thousand years after the first development of the urban form. Other clearly elite activities, such as elaborate burials, writing,

and evidence of leadership, also came later in the Mesopotamian tradition and were not characteristic of the first cities there (Adams 2012; Sinopoli et al. 2015: 389).

The chapters in this volume affirm that although the overt demonstration of political leadership is an urban development, the archaeologically visible manifestations of symbolism and integration come *before* the emergence of discernable leadership. In places that were already densely settled, the rapid subsequent development of leadership (with its accoutrements of elaborate burials and living quarters, ceremonial garb, genealogies, and public presentations of self-sacrifice and ritual potency) was not merely a response by aggrandizing individuals to the opportunities for display and power but was created at least partly in response to the “bottom-up” needs of the moral community. Urban inhabitants who were already engaging in more tasks, and more types of tasks, might have found it convenient to outsource the more elaborate forms of ritual to leaders who essentially functioned as full-time specialists in that genre (cf. M. L. Smith 2010: 182). Support for this perspective can be found not only in the continued augmentation and modification of ritual structures, but also by transformations in ritual behavior as indicated in the chapters by Guernsey and Strauss (Chapter 9) and Love and Rosenswig (Chapter 7). Changes such as a decline in the use of ceramic figurines and the rise of more public ritual actions over time should not be interpreted as indicating a diminution of religion and ritual (which no doubt continued to serve as very strong components of individual and household identity), but perhaps a sign that time-pressed and multitasking urban residents willingly relinquished the minutiae of ritual to leaders who took on the duties of calendrical management, religious devotion, and other ceremonial tasks (see Guernsey 2012, 2020).

A focus on leadership as an urban epiphenomenon enables archaeologists to address urban discontinuities, which are amply demonstrated in the archaeological record of Mesoamerica. Leaders found themselves in a precarious position despite their material posturing, and if they failed to deliver, the reactions were likely to have ranged from exasperation to hostility (see, for example, Houston et al. 2003; Inomata 2016; Pool and Loughlin 2016: 301). The mutual integration of social and political diversity was both dynamic and fragile, resulting either in permanent disaggregations of urban centers (as discussed for La Blanca by Love and Rosenswig, Chapter 7 and for Tres Zapotes by Pool and Loughlin in Chapter 3), or reconfigurations that enabled urban centers to reformulate themselves (as Arroyo in Chapter 6 addresses concerning the effects of the new waterworks at Kaminaljuyu after 150 CE). When people became tired of overextending themselves, they abandoned cities and migrated back to the countrysides with their moral community intact, leaving the monumental spaces of the city to become “ruins.”

CONCLUDING THOUGHTS: MESOAMERICAN URBANISM AT THE JUNCTION OF SPACE AND TIME

The current status of research on early Mesoamerican cities illustrates the considerable promise of the continued elaboration of the two axes that have always been the focus of archaeological research: space and time. In the extended understanding of urban landscapes that have been made possible through both lidar work and intensive pedestrian survey, it is now clear that the landscapes of urbanism are multicomponent and variable. Links between and among sites were the result of both hierarchical and heterarchical relationships, with active covenants and latent consortia interwoven among households, hamlets, and urban neighborhoods. To this understanding of urban landscapes as situational and dynamic because of human relationships, we should also add the way in which landscapes were situational and dynamic because of natural mass-event changes (such as storms, volcanic eruptions, and earthquakes) and because of incremental natural processes of drought and vegetation growth.

Excavations will continue to be important not only because of the capacity for increasingly fine-grained chronologies that reveal the internal dynamics of the lived urban environment, but because excavations will be the only way for some cities to be studied at all. While many Mesoamerican urban sites are famously remote even today, others lie at the heart of modern cities and are less amenable to the totalizing revelations of lidar coverage. For sites like Kaminaljuyu, located within the vast expanse of Guatemala City, excavations will increasingly take precedence as the principal form of data collection for the discovery of the extensive interstitial relationship of the ancient city with its hinterland. An excellent example is the research at Kaminaljuyu that has revealed the presence of a 5 km long mound and numerous canals that constituted the city's hydraulic system (see Arroyo, [Chapter 6](#)). In Guatemala City, as in other places such as Mexico City, modern development activities function as the equivalent of random sampling, providing data about locales that archaeologists might not have preferentially targeted for academic research.

Temporal considerations, brought to light by deep stratigraphic excavations in Mesoamerican urban centers, enable us to extend our queries beyond the simple idea of establishing urban foundation dates or ascertaining the length of occupation of urban sites. Through the evaluation of changes over time at single structures, we can recognize the ways in which cities are not accidental palimpsests of accretionary remains but were actively created through purposeful investments in artifacts and architecture. Investigations will continue to provide new data that expand our understanding of ancient cities beyond their most obvious monumental focal points. Making use of these cumulative and

opportunistic windows of information will require coordinated efforts of data integration similar to those developed for other global regions that have sustained long and diverse traditions of scholarship (e.g. Heitman et al. 2017). Investigations of ancient cities that lie beneath modern ones now make use of linked data sets, GIS programs, and three-dimensional visualizations that enable new models and hypotheses to be developed with reference to underlying topography and geology. The cumulative effect can be an exciting boost for both archaeological analysis and the promotion of urban heritage, as seen in other cities with deep histories such as London (mola.org.uk), Xi'an (Wang et al. 2018), and Athens (Katsianis et al. 2018).

In sum, research in ancient Mesoamerica illustrates that urbanism is a phenomenon that emanates from dynamic and richly textured human landscapes. The many shared rural and urban configurations of social, economic, and ritual activities provided a basis of communication and community that became augmented and enhanced in the first cities. In those urban areas, leadership was eventually aggrandized into highly visible statements of power, but only after long phases of incremental, communal growth solidified by the construction of numerous types of social and ritual edifices throughout the landscape. The demonstrated discontinuity of urban form and function relative to a robust countryside provides compelling models for research elsewhere, and an affirmation that the rationale for urbanism – the resounding question, “why cities?” – is still far from conclusively answered.

CHAPTER ELEVEN

EXPERIMENTAL CITIES?

Norman Yoffee

ALTHOUGH THIS WAS NOT THE FIRST SYMPOSIUM¹ FOR WHICH I discussed papers whose topics are remote from any pretended expertise of mine – I once discussed at the AAA (Australian Archaeological Association) a panel on “Trends towards social complexity in Prehistoric Australia and Papua New Guinea” – the resulting chapters in this volume present special challenges. That is, I’ve been thinking a lot about early cities in connection with a book that I’ve recently edited, *Early Cities in Comparative Perspective, 4000 BCE–1200 CE* (Yoffee 2015).

The chapters in that volume did not explore the rise of cities; rather, they considered certain themes in early urbanism: cities as arenas of performance, information technology in cities, the relation of urban and rural landscapes, the distribution of power in cities, early cities as creations, imperial cities, and (in the innovative part of the volume) how one compares early cities within those themes. Thus, looking at instances in Mesoamerica of the evolution of cities

¹ I first read the papers that have been transformed into chapters for this volume in the symposium “The Early Mesoamerican City: Urbanism and Urbanization in the Formative Period,” organized by Michael Love at the annual Society for American Archaeology conference in Austin, Texas, in April 2014. I thank Michael for the invitation to discuss the papers at that meeting and especially for the opportunity to discuss issues at the subsequent conference in Antigua, Guatemala in October 2016. That gathering was followed by an unforgettable tour of Tikal and other nearby sites with Michael Love and Julia Guernsey (and Monica Smith, Bobbi Culbert, and Barbara Weber). Thanks to Julia for correcting and clarifying points in this chapter.

requires that I re-focus on how urban institutions and landscapes came to be. Now, in the area I know best, Mesopotamia, our knowledge of the trends toward urban societies is – how shall I put it? – uncertain (McMahon and Crawford 2014). In Mesopotamia (Iraq and the Middle East in general), early villages may constitute the lower strata of huge tell sites and are seldom reached in excavations; settlement patterns have been reconstructed from surveys, but few early villages have been dug; and there have been few long-term excavations. Reading the chapters in this book about the development of cities in Mesoamerica is refreshing and very anthropological since it “de-familiarizes” my own work. By examining other regions, one may return to one’s own bailiwick with fresh ideas.

Of course, the editors’ intention is that I might provide a different perspective on research on early Mesoamerican cities. My perspective is certainly unbiased. What little I know about Mesoamerican archaeology does not include much about the Formative period. I think I must have referred to El Mirador somewhere in passing and know a little about some Olmec sites (since Christopher Pool’s [2007] book was published as part of the *Cambridge World Archaeology* series on whose editorial board I serve). I do try to keep up with some research on Teotihuacan, since George Cowgill regularly informed me about his projects (Cowgill 2015), and there is a chapter by Sarah Clayton (2015) in *Early Cities in Comparative Perspective*. Saburo Sugiyama’s chapter in this volume brings me up to date with new information on the early periods of Teotihuacan, with which I am less familiar.

In any essay on “cities” it is inevitable that one attempts to “precise” the word. Cowgill once commented that defining cities was like Supreme Court Justice Potter Stuart’s comment on what constitutes pornography: “I know it when I see it.” Thus, Travis Stanton and Ryan Collins state that Yaxuná is “clearly urban” in the Late Formative. All the other authors in this volume speak assuredly about cities or “urban spaces” (Love and Rosenswig, Chapter 7), “urban centers” (Canuto and Estrada-Belli, Chapter 4), “normal” cities (Love and Rosenswig, Chapter 7), “city-state cultures” (Love 2011a), “urban identities” (Guernsey and Strauss, Chapter 9), “the beginnings of urbanism” (Arroyo, Chapter 6), “urban development” (Stanton and Collins, Chapter 5), “the quality of urban life” (Sugiyama, Chapter 8), “variation in urban form” (Pool and Loughlin, Chapter 3), and “initial urbanism” (Joyce, Chapter 2). I have no intention of gainsaying the experts.

But let me be clear – ahem – about what I mean by cities (copying and digesting comments in my introductory chapter in the volume on *Early Cities in Comparative Perspective* [Yoffee and Terrenato 2015: 1–2]): cities are long-lasting settlements that are rather large in area and have quite a few people, several thousands of them, who live quite closely together and are socially diverse; there are leaders and their minions who keep track of people and

things in the city and people and things that enter and leave the city; cities have a center with impressive architecture that affords and/or restricts access to political, social, and/or ideological activity; cities depend on food-stuffs that are produced in the related countryside for the benefit of those in the cities; cities provide certain services and manufactured goods to people in the related countryside and acquire, through long-distance trade, luxury and utilitarian goods; cities provide a sense of civic identity to the people living in them (and in their related countrysides), and they are the arenas in which rulers demonstrate their special connections to the high gods and the cosmos; cities are containers of potential social drama and discontent among various competing/cooperating social groups and their local leaders; and cities create and incubate significant environmental and health problems.

It will be no surprise to aficionados of research on cities that these qualities of cities are gleaned from thinkers in many fields. But what about the “evolution” of these qualities? The chapters in this volume speak precisely to these issues. There is no attempt – indeed there is resistance to any attempt – to claim there is only one kind of early city in Mesoamerica. Whereas there may be some common pathways toward urban life, various factors – the kinds of leaders, social groups, urban landscapes, and art and architecture (both monumental and residential), etc. – can and do vary greatly in early Mesoamerican cities. My task is to denote both commonalities and differences in the growth of urban places as depicted in the chapters in this volume. I shall be brief since I don’t need to repeat points clearly made in the chapters and only seek to emphasize and comment on points made across them.

How and why did large numbers of people come into and form early Mesoamerican cities? As Michael Love ([Chapter 1](#)) has forcefully put it, cities did *not* grow from a time “when ‘non-city’ was the norm” (Canuto and Estrada-Belli, [Chapter 4](#)) through a gradual (or non-gradual) population growth, a kind of biological phenomenon dependent on more stable food supplies and relative lack of morbidity factors, but grew rather through the “agglomeration” (or aggregation) of people. That is, urban places became populated as the countryside was “depopulated” (according to Joyce, [Chapter 2](#)) and people “slid” (as it were) into what became cities. This phenomenon of the depopulation of the countryside as cities became cities has been documented by Robert Adams ([1981](#)) for Mesopotamia. In the formation of Uruk and other cities in southern Iraq, the number of sites dropped precipitously in the late Uruk and Early Dynastic periods, and perhaps 80 percent of the population in southern Mesopotamia lived in cities. Thereafter, the countryside was re-peopled, but now the countryside became the hinterland of cities. This is the process called “ruralization” and it is as important as urbanization (see Love and Rosenswig, [Chapter 7](#); Yoffee [2005](#)).

Survey data from other regions show that cities like Wari in Peru, according to Katherina Schreiber (personal communication), grew as the countryside became depopulated, and, of course, this is the message of the surveys in the Teotihuacan Valley as Teotihuacan became a city. Sugiyama ([Chapter 8](#)) suggests that part of the process of ruralization occurred as “the quality of urban life” attracted people from the countryside. By 200 CE at Teotihuacan a “master plan” was formed by those who were expert engineers and vested with mathematical and astronomical knowledge. The plan of Teotihuacan and the major pyramids and other constructions connoted the movement of the sun, and symbolized male and female deities and cosmic forces within the ritual cycle. There was a relatively short period of construction in which new ideas were materialized. People in the countryside were drawn into the city so as to celebrate rituals, participate in processions, and understand the cosmos. How are ya gonna keep ‘em down on the farm after they’ve seen Teotihuacan?

A similar process, if not on the scale of Teotihuacan, seems to characterize other areas in Mesoamerica. For Marcello Canuto and Francisco Estrada-Belli ([Chapter 4](#)), cosmological constructions of E Groups were “conceived ‘at once’” as a product of “processes of interaction” among people in the countryside that crystallized in new cities. (This formulation is slightly different than that of the authors). This “ideological narrative” (Canuto and Estrada-Belli, [Chapter 4](#)) as materialized in E Groups is also discussed by Stanton and Collins ([Chapter 5](#)) who note how the solar calendar was memorialized through new constructions such as dance platforms and procession routes. Ceremonies and rituals that enact the place of people in the cosmos is both a reason why people come to cities and how power is accumulated by those with knowledge of how to conduct ceremonies. I shall return to this point of ritual power and its implications for urban life below.

The phenomenon of aggregation is important beyond simply the number of people moving into cities. Movement from the countryside into cities entails that people from different areas with their distinctive social organization, kinship relations, local leaders, economic practices, and even different languages became co-residents, citizens. Stanton and Collins ([Chapter 5](#)) consider the new urban identities, in addition to their local identities, that people must create and/or adopt (also addressed by Guernsey and Strauss, [Chapter 9](#)). The matter of preserving local identities includes distinctive forms of ancestor worship and perhaps the preservation of memories of a non-urban past. Arthur Joyce ([Chapter 2](#)) talks of “corporate identity,” meaning identity, perhaps multiple identities, of local groups who have moved into cities. Pool and Michael Loughlin ([Chapter 3](#)) point to “factional leaders” and “city districts,” in fact “competing social and political factions,” at Tres Zapotes. Citing studies at Jene-Jenno in Niger by Susan McIntosh and Rod McIntosh

(see McIntosh 2015), which describe a city without a central governmental power, Canuto and Estrada-Belli (Chapter 4) note a “horizontal solidarity,” and “heterarchical mechanisms” in Late Formative cities. By heterarchy, I assume they mean the existence of various groups and kinds of groups each with its own hierarchy, and also the possibility that some members of one group might have a different status in another group. That is, membership in a local group does not preclude having membership in a nascent ritual or governmental hierarchy. Citing Bárbara Arroyo’s archaeological investigations, Michael Love (Chapter 1) delineates separate districts and ceremonial places at Kaminaljuyu.

These discussions mean to problematize, it seems to me, the notion or quality of “integration” in early Mesoamerican cities. Joyce (Chapter 2) discusses the “tenuous, contested, and fragmented” nature of early cities before Monte Albán in Oaxaca. Love (Chapter 1) notes the not “tightly integrated” case of La Blanca and other early centers in the Soconusco region. Indeed, in a recent article, Joyce and Sarah Barber (2015) muse whether religion was a disequilibrating factor in early Oaxacan cities.

I would go further and assert that attempts at “integration” in early cities and states (and perhaps in many societies that are not cities or states by anyone’s definition) often lead to disintegration, and this has a logic and an empirical basis (Yoffee 2019). For example, in Shang China, the largest cities of the world in the second millennium BCE – Erlitou, Zhengzhou, and Yinxu, the latter more than 30 km² with perhaps 200,000 people – each lasted less than 200 years before being abandoned (Liu and Chen 2012; Shelach-Lavi 2015; Li 2018, 2019). The power of the rulers of these cities was enormous, the class stratification clear and shocking, the territorial ambitions of the rulers hubristic. In Mesopotamia we are accustomed to marveling at the sudden appearance of the 9 ha temple precinct of Eanna in Uruk in the Uruk IV period (ca. 3400–3200 BCE), the appearance of writing, monumental art, stratification of all sorts, and imperial ambitions (Emberling 2015; Nissen 2015). There is less discussion that the last level of the temple precinct built during Uruk IV was burned down and the temples of Eanna leveled. In Mesoamerica we see that the ceremonial center of the city of Teotihuacan, which was planned around 200 CE (Sugiyama, Chapter 8), was torched and burned around 550 CE, probably in an episode of fiery internal resistance to the powers of the city (Millon 1988).

Early cities were *ironies* in that great power was also marked by great fragility (Yoffee 2019). James Scott (1998) has written (in his work on modern and pre-modern states) that the goal of governments is to “*simplify*” their societies, to promote extreme acts of integration, and this process often caused their delegitimation and fragmentation. It was precisely the forces of aggregation and governmental attempts at integration that created (or mobilized) the

cleavage planes of resistance to exactly such efforts. Models of cooperation in the evolution of “complex” societies, as one often reads about in certain “agent-based” models, have their – shall we say – lacunae. Perhaps even the term “evolution of complexity” (a sacred term in the archaeological literature and in archaeology courses) could be replaced by the term “evolution of fragility.” The different groups of people who move into cities (or villages, see Fowles 2015), and are said to become “integrated” in those cities, could easily become foci for resistance to the goals of the new rulers of cities. I shall return to this point in considering the nature of “collapse” of early Mesoamerican cities.

Julia Guernsey and Stephanie Strauss (Chapter 9) consider the emergence of a Late Formative “high culture” within regions and extending into something “Mesoamerican.” They speak of the development of a “high culture” in art and architecture, and an “elite communication sphere that transcended linguistic and ethnic boundaries” and, importantly, political boundaries. They further discuss the symbolic vocabulary that proclaims the ineluctable role of the king in the cosmic order. Literacy in the Late Formative “inscribed a conception of urbanity” that was part of the king’s “message of social order” in cities.

This analysis makes sense to a Mesopotamianist. As in the Maya region, in Mesopotamia one speaks of a “high culture” that overarches independent political units, for the most part, city-states (e.g., Baines and Yoffee 1998; note that the “intersections of text and image” are also characteristic of Egypt as John Baines [2015] notes). The message in both areas is that one must not conflate the development of political systems and the nearly coeval development of high cultural systems. Culture makes the Maya Maya whereas Maya city-states (like Mesopotamian ones) were struggling to conquer enemies/neighbors and/or defend themselves from their neighbors. But how and why did these regional “high cultural systems” develop?

Trying to explain the evolution of these systems would take us beyond the scope of this chapter (and into speculations that I am hardly confident about). Let us say only that the early history of “non-city” life (quoting Canuto and Estrada-Belli, Chapter 4) in Mesoamerica indicates there were many contacts, through movements of peoples and ostensibly through early trade and exchange (Freidel 2016). The development of commonalities in beliefs and symbols of belief systems seems to have emerged in the process of facilitating movements, including into the new urban places, and provided a basis for interactions within cities as well as regionally. If the Mesopotamian case can be considered comparable, there were also movements of peoples from northern regions of Mesopotamia to the emerging cities in the south. There were many ethnic and linguistic groups in all regions of Mesopotamia, and the emergence in the later fourth and early third millenniums of a canonical written language

(Sumerian) and a common belief system transcended regions and set norms and aspirations of rulers: there *should* be rulers, because the gods have ordained kingship, and society *should* consist of priests, officials, craftsmen, warriors, slaves, etc.

Michael Love writes (in an email) that

many cities in the outer coast, such as El Ujuxte, are abandoned near the end of the Formative. Cities in the piedmont and highlands, which would include Izapa, Tak'alik Ab'aj, and Kaminaljuyu survive, but are diminished in size . . . The novelty [of urban life] must have been startling or invigorating. Both the city as a way of life and the state as a political system were fragile experiments that fell apart often.

I've already asserted that many early cities, in China and Mesopotamia as examples, were fragile and that centralization and "integration" often led to resistance to rulers and governments. But are collapses of early cities in Late Formative Mesoamerica like those collapses?

Perhaps not. Stanton and Collins ([Chapter 5](#), among others) refer to "ritual hierarchies" dominating the new regional centers of the Late Formative period. Power in these centers accrued to ritual leaders who conducted new and grandiose ceremonies. Rather than compare Late Formative Mesoamerican cities to early cities in China and Mesopotamia, however, one might posit that such ritual power was "situational," that is, attendant on influxes of people into ritual centers and the institutionalization, at least for a while, of a kind of corvée labor that was directed by ritual leaders. If so, one might point to similar explosions that resulted in monumental architecture and wealth at the disposal of ritual leaders who directed the construction of places such as Chaco Canyon or Cahokia in North America. The latter is arguably a city (Pauketat 2009), but again, arguably, not a state (Thomas Emerson, personal communication). That is, the nature of hierarchical leadership rested in differential access to ritual knowledge and high position in the kinship system. In both Chaco and Cahokia such leadership could mobilize large numbers of people from various places and with various social orientations, command tribute, and segregate wealth, but it was much harder to impose social order and to garner wealth from disparate people over longer periods of time. Both Chaco and Cahokia, of course, after spectacular starts – "big bangs" in Tim Pauketat's (2009) terminology – collapsed after about 200 years and were abandoned. In the case of Chaco, oral histories of later, descendant Pueblo peoples see the Chaco explosion as a time of impiety, which brought the disfavor of the gods (see Fowles 2015; Lekson 2009).

In Mesoamerica, of course, the trajectory to larger cities, more elaborate ceremonies, much more trade, and the elaboration of the ideology of rulership in art and in texts that had begun in the Formative did not cease. Cities lasted several hundreds of years with notably different kinds of organization, in kind

and in scale, but struggled to persist in new and different ways. The chapters in this volume have insisted that the study of cities is not about essentializing the term “city” or campaigning for a tidy definition of “the city.” It is about how urban landscapes were formed, about how new forms of sovereignty were incubated as experiments. Following collapses or significant transformations of these experiments, the region-wide ideology that there must be cities led to reformulations of the urban experience. After the development of the Late Formative cities, there was no turning back from further experiments in living in urban landscapes.

Are all early urban experiments the same? – is a question that might be asked (Wright 2006). It’s the sort of question that a prior generation of anthropological archaeologists had put in the desire to discover laws of social evolution. After reading the chapters in this volume and in consideration of the evolutionary trajectory of cities in Mesopotamia, the answer might be both yes and no. That is, there is clear similarity in the emerging landscape of urban political systems in both Mesopotamia and Mesoamerica. In both regions there are city-states, not territorial states (or, rarely, territorial states which then tended to break-down). In “high cultural” terms, moreover, we observe the development of a regionally overarching vocabulary (*sensu* Guernsey and Strauss, Chapter 9) of symbols and their referent beliefs: there should be cities, and in the cities there are a broadly similar set of divinities, explanations of the origin and nature of the universe, and the social order of human (but also divine) kings who served the high gods and their own ancestors.

Unlike the Formative period experiments in Mesoamerica, and in spite of the difficulties in understanding the development of urban places in Mesopotamia, it seems that Mesopotamian cities appeared suddenly and without near-urban precursors; rather it was from the context of modest village life that the megacity Uruk (the best-known of the urban places in the south at the middle and end of the fourth millennium BCE) appeared. This is at least partly the result of the retreat of waters from southern marshlands, more-or-less to the present position of the Persian Gulf. New land “encouraged” the migration of people into new pilgrimage centers, the development of places of defense against enemies (mainly living in nearby rising cities), and the construction of vast temples and the houses of new leaders (Pournelle and Algaze 2014).

In Formative Mesoamerica, especially in Maya country, Middle Formative experiments in urban life led to Late Formative cities. Many of these cities, however, collapsed – the experiments failed – in various ways, paces, and extents. Newer cities in the Classic period adopted and adapted the ideological vocabulary of Formative cities, but with massively intensified emphasis on the authority of rulers. These rulers succeeded in disembedding resources from the mix of ethnic and social groups living in the cities and from the newly dependent countrysides. Eventually, these new experiments were unsustainable.

In Mesopotamia, cities and urban life had many vicissitudes, as cities alternately exercised hegemony over others, resisted the control of some cities and their leaders, or more often became dependent on more powerful cities included in the evanescent territorial states (Yoffee and Seri 2019). The collapse of dynasties in cities ushered in new leaders and their people, often from the countryside where they had formed military cadres (e.g., Richardson 2005). The new leaders in cities adopted the “Mesopotamian ideology” from the past, in large part to claim legitimacy over old cities which were still the homes of “Mesopotamians” or those who had become “Mesopotamians.” Uruk, “the first city,” was also among the last cities, flourishing under Hellenistic and Persian conquerors of the land (Crüsemann 2013). Kish, the most powerful city in Mesopotamia in 2500 BCE, became subject to rulers of the city of Akkade (around 2350 BCE) and then to other neighboring cities, especially Babylon, for the next 2,000 or so years. It was only as the inhabitants of Mesopotamia abandoned their Mesopotamianness, their languages and belief systems (cf. Dalley 1998), that one may speak of the collapse of Mesopotamia.

Is there a moral to all this? If so inclined, one could simply say that early urban life itself, in its variety of forms, was fragile, if in many different ways. Just as the “collapse” of ancient urban life took many paths, there is also no single course either of regeneration or how the past is remembered. Modern Maya people celebrate their urban past amidst the ruins of ancient cities. Teotihuacan’s past is part of the history of Mexico. Modern Middle Easterners, on the other hand, now witness the destruction of their ancient, ruined cities and so their history; indeed, a few will it.

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